Drug & Cosmetic INDUSTRY

JULY, 1949

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ELMER SHEETS, Managing Editor
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M. A. LESSER, Technical Editor
HARRY G. KELBLY, Raw Material Editor
JUSTUS W. MATTHAEI, News Editor
HILDA C. McCOLLOM, Art Director

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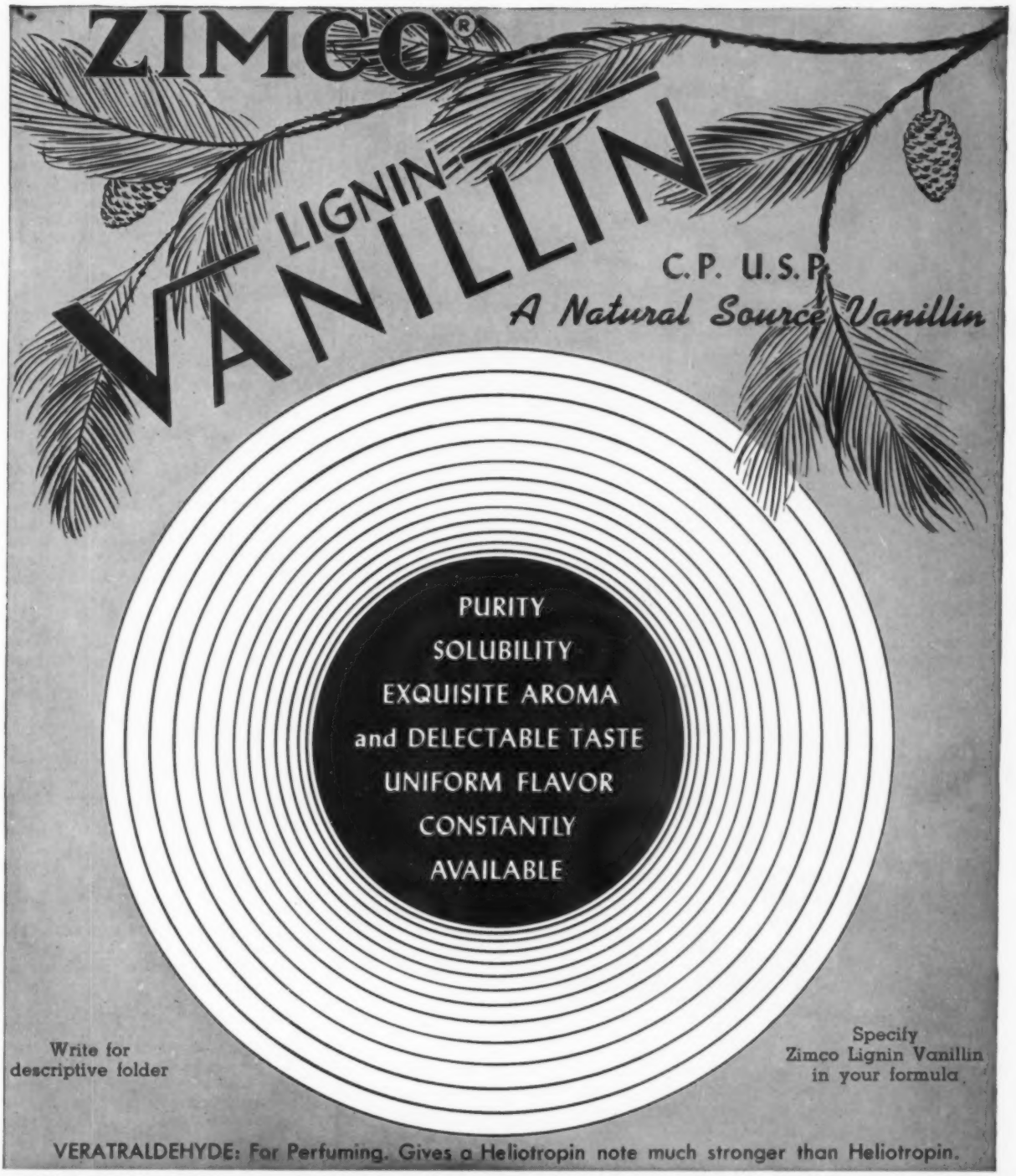

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A NEW MATERIAL FOR MEDICINAL CAPSULES is described as containing hydrolized gluten, mineral oil, gelatin, glycerine and water. (D-15)

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STABLE EMULSIONS OF OIL AND GLYCERINE can now be obtained by the addition of a small amount of prolamine as an emulsifying and stabilizing agent, a recent patent states. (D-16)

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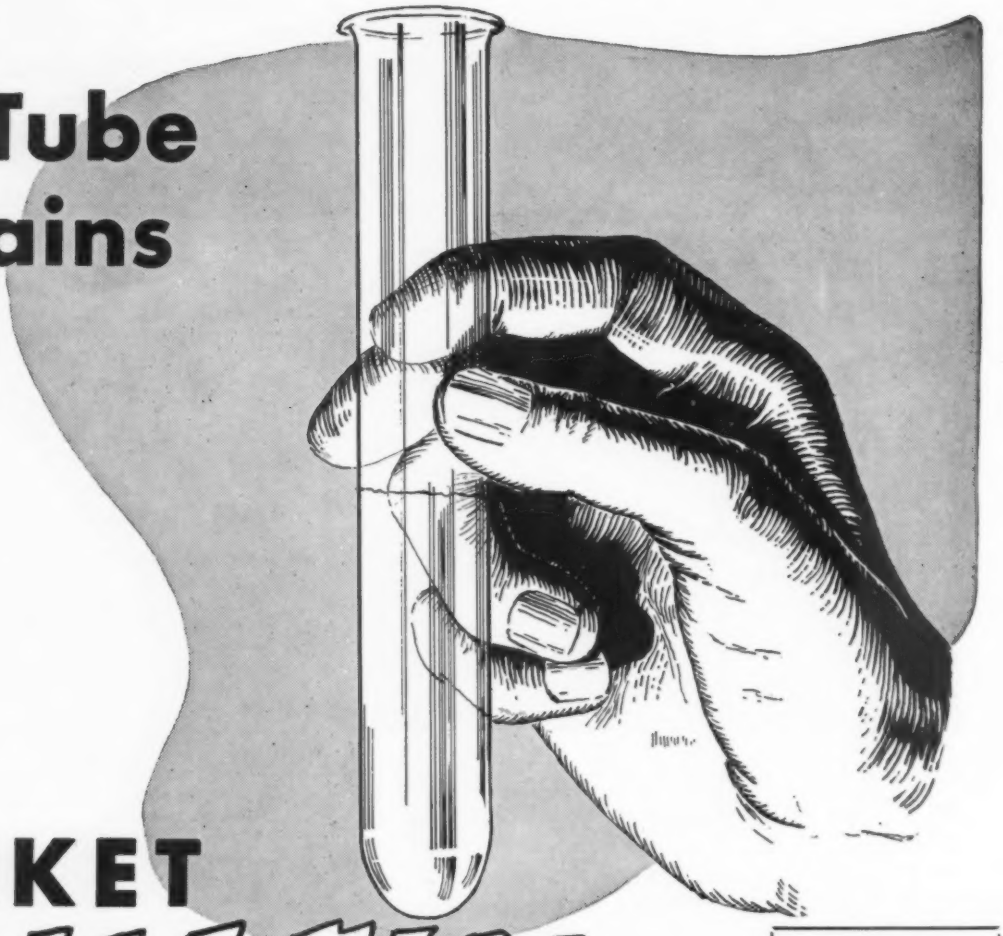

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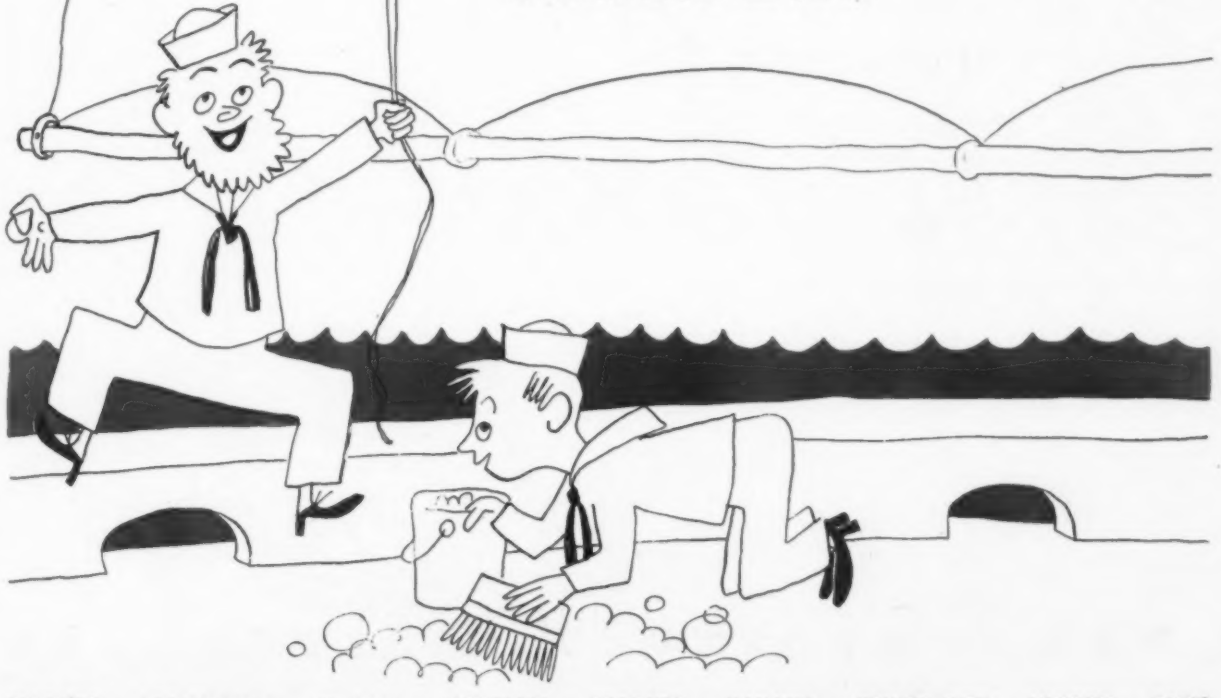

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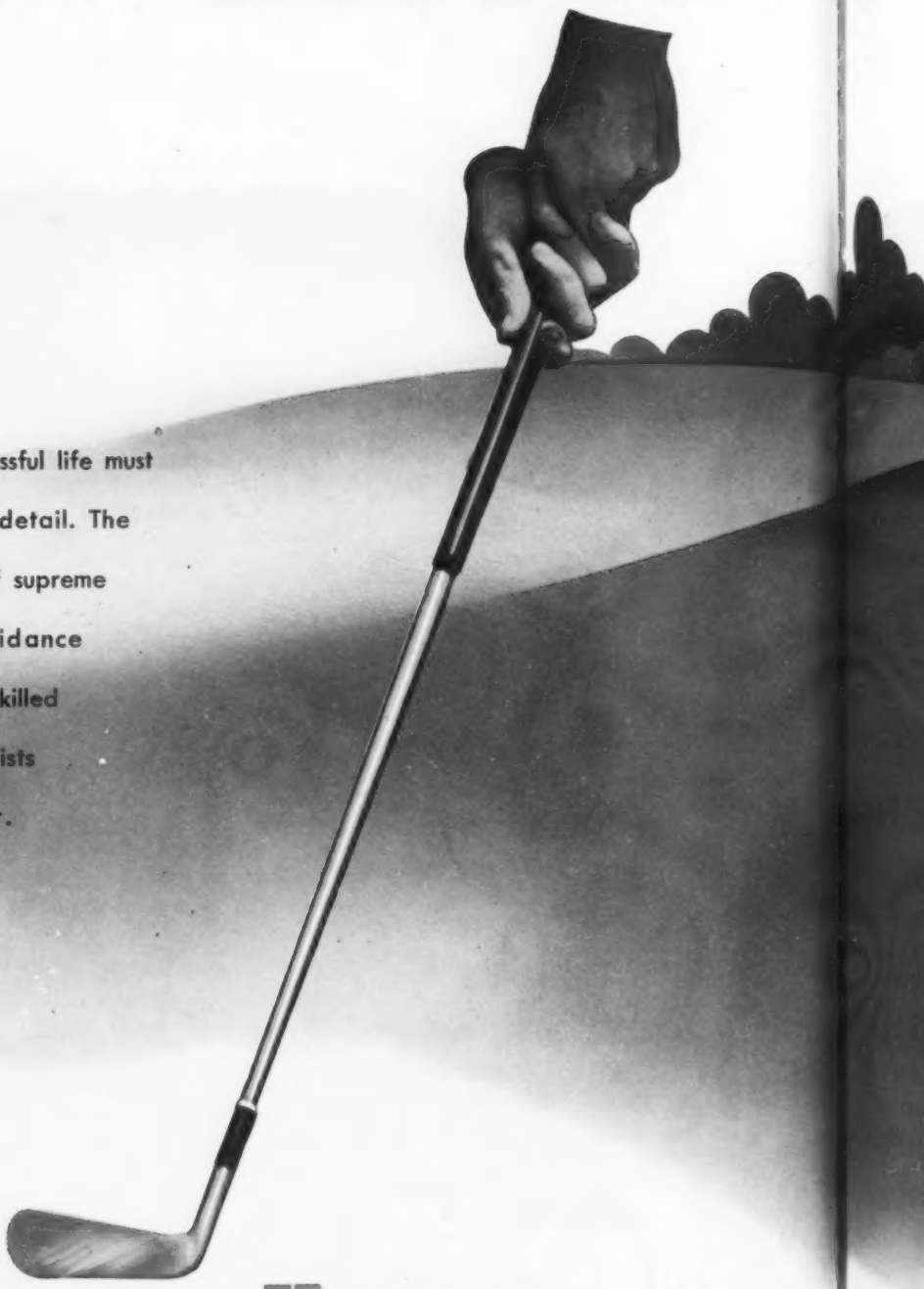

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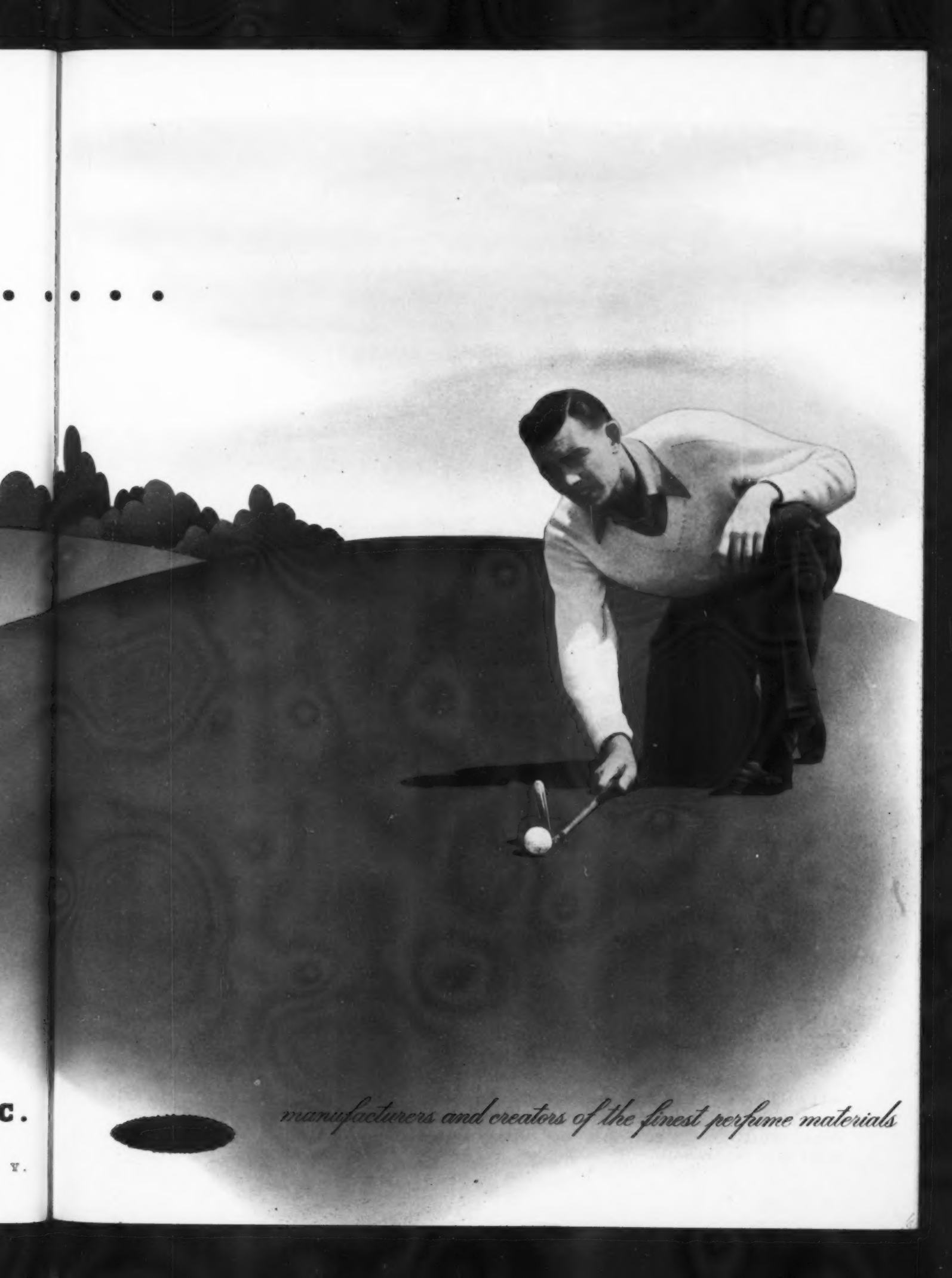
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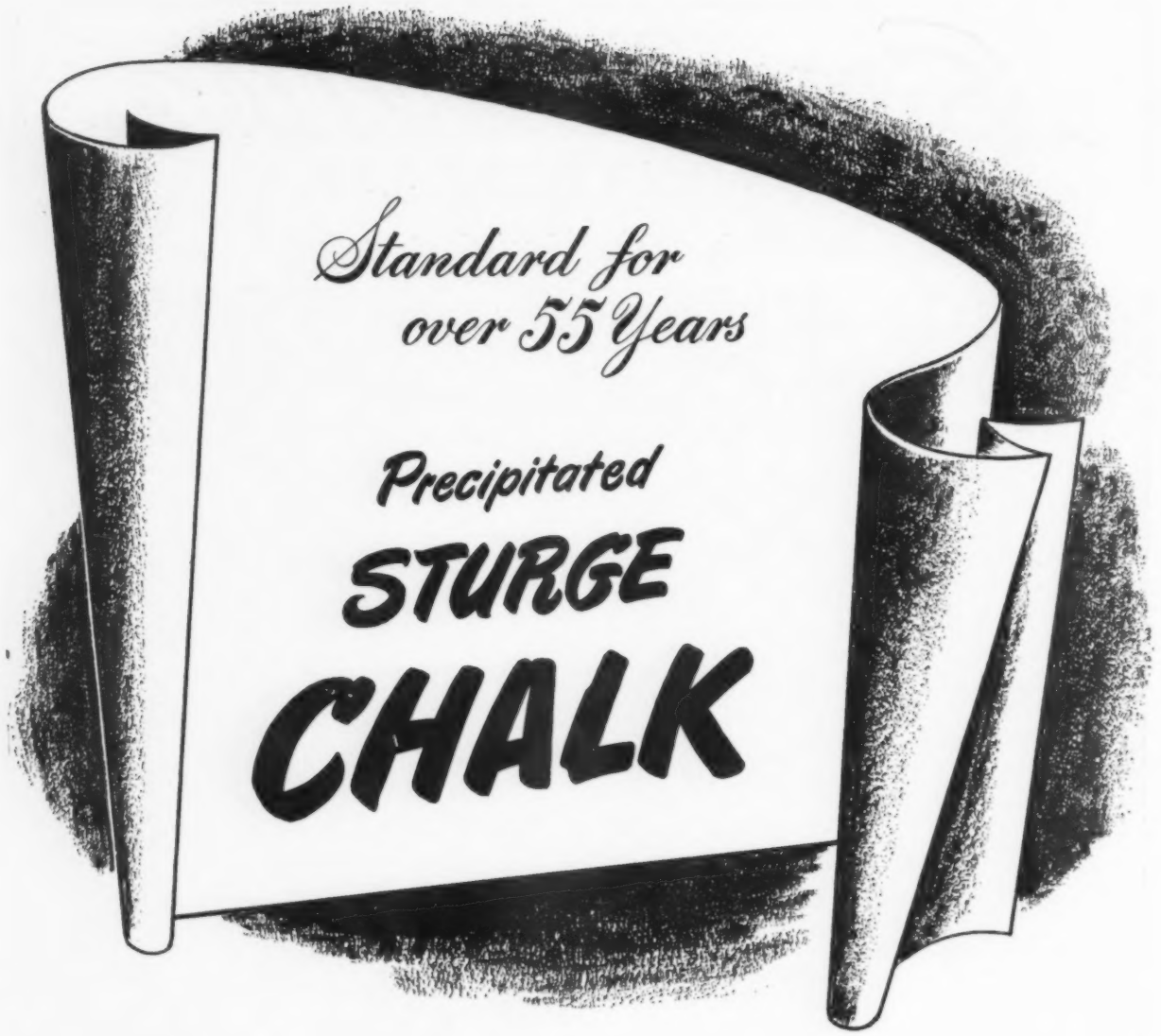

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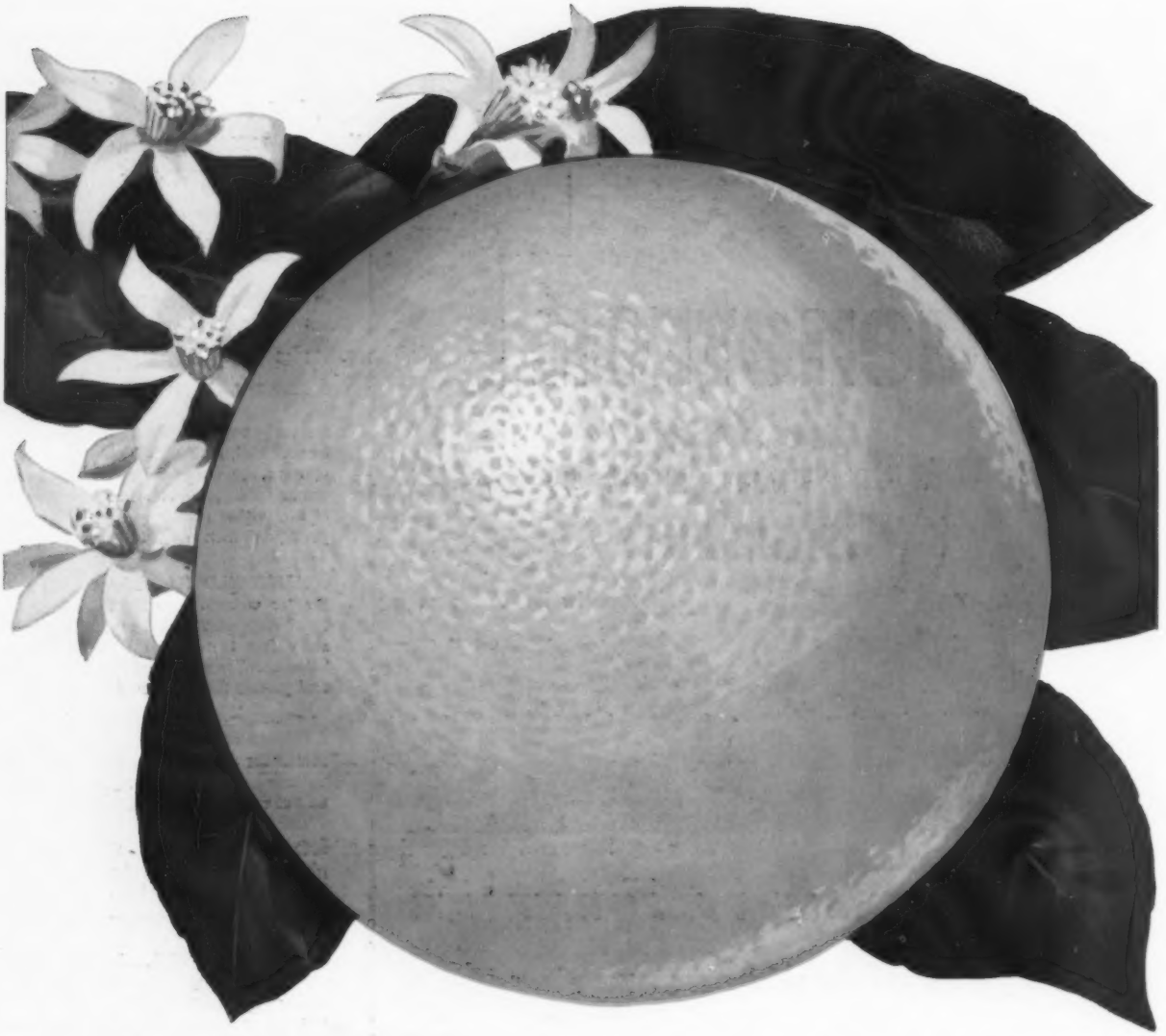

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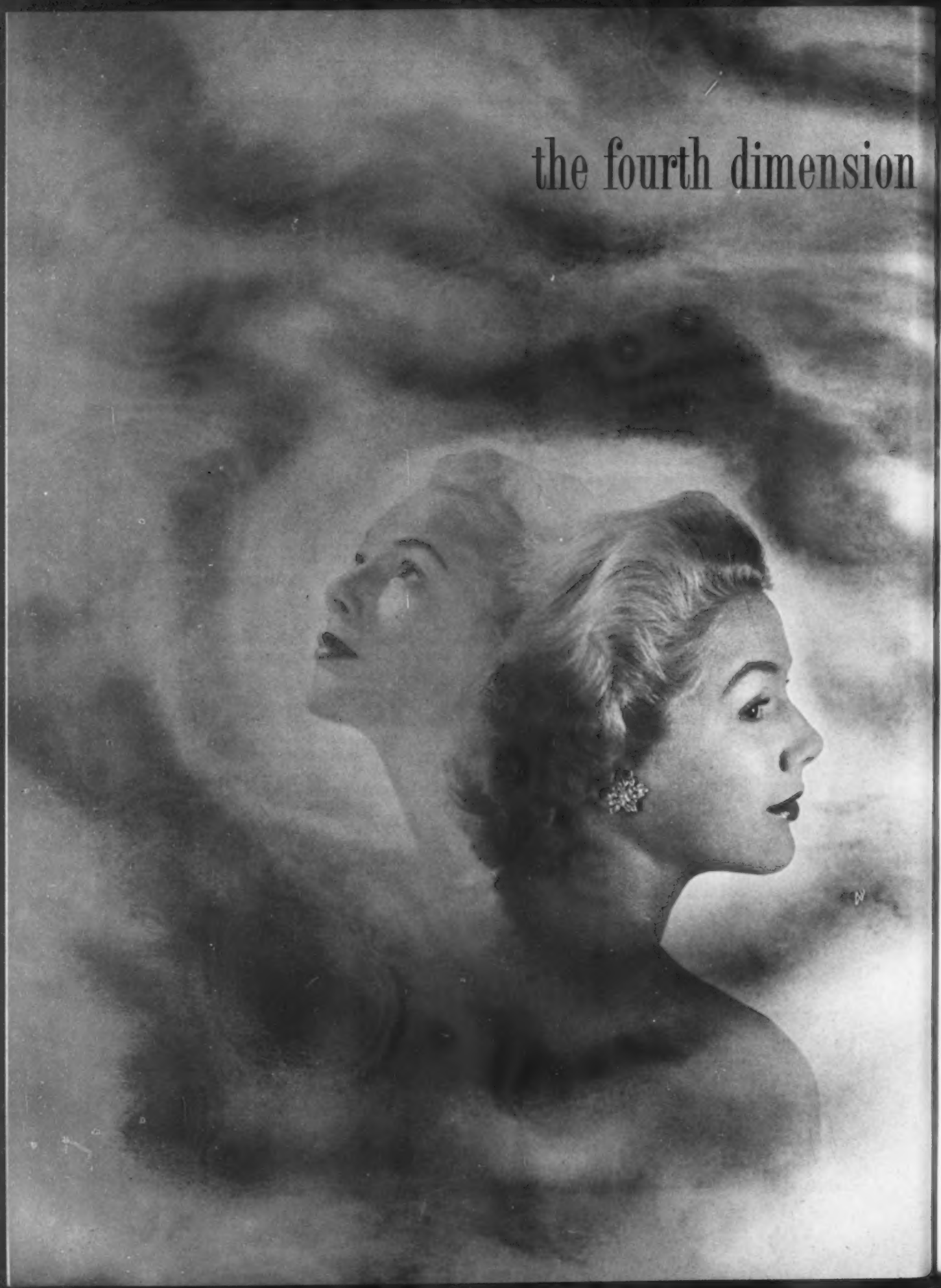
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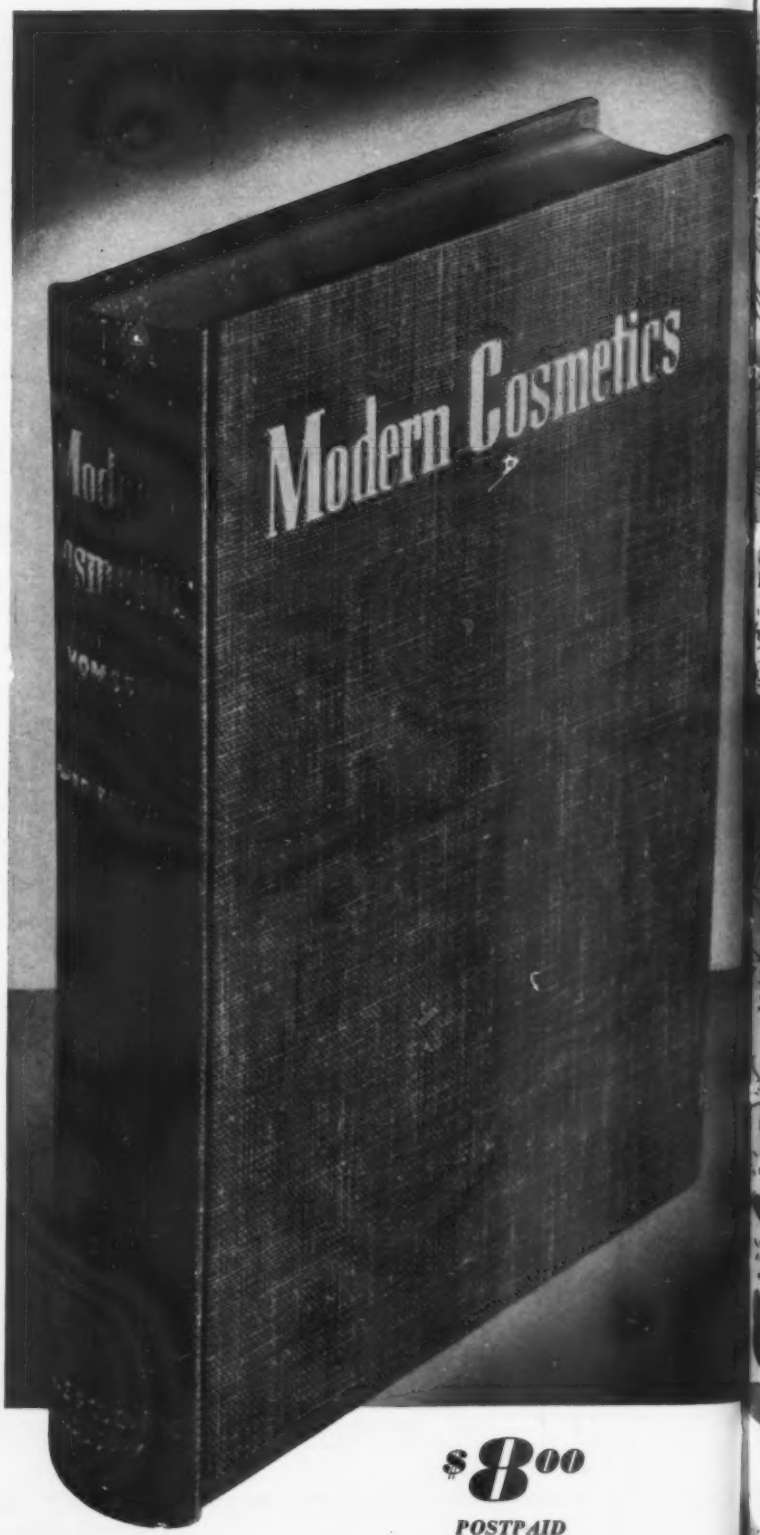

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The Passing of Fishbein

WITH the passing of Dr. Morris Fishbein from the scene as editor of the Journal of the American Medical Association and numerous activities including —which he many times carefully denied—that of spokesman for the A. M. A., we wonder just what the future attitude of the A. M. A. toward progress in availability of medical care will be. In the past Dr. Fishbein wielded the power to make or break physicians who did not follow the line which he drew, and he at least tried to wield similar power over many drug manufacturers. The power and the right to wield it when and where he saw fit was exercised by Dr. Fishbein either by definite approval of those in control of A.M.A. policies, or by failure of these people to curtail this power. Doubtless, Dr. Fishbein was the type of man who would take the bit in his mouth and run with it, but those who could have done something about it evidently could not agree on checking him and probably enjoyed fully the demonstration of the power that could be wielded in the name of organized medicine.

The powers that be in the A. M. A. were somewhat late in checking Dr. Fishbein's power. In recent years he has done almost irreparable damage to the right of the American Medical Association to be considered as a reliable spokesman in any discussion of what is best for this country in the way of medical care. The fact that Dr. Fishbein used the A. M. A. Journal as his personal organ to whip into line through inspired "scientific" articles, the drug and pharmaceutical manufacturers of the country was something that made him both feared and hated by the great majority of manufacturers. However, within recent years Dr. Fishbein has changed these tactics to woo the manufacturers to contribute to his misguided efforts to keep the practice of medicine in *status quo*.

When Dr. Fishbein opposed and took steps to penalize physicians who sought to practice group medicine in California, the A. M. A. should have curbed him. Later when he tried the same tactics to break up the practice of group medicine in Washington, D. C. for the benefit of a U. S. Government agency, the step that eventually led to his downfall had been taken.

Later he tried to wield his power against Henry J. Kaiser's attempt to provide medical care to his workers and their familes through the method of ordering drafted the young doctors which Kaiser had to have. Kaiser proved too much for Fishbein and a Senate hearing was held and once more Fishbein went down for the count. These sort of things mounted until the opinion was expressed by legislators in Washington that any proposal brought forward by Fishbein would not even be given consideration for the very reason that Fishbein presented it.

There has long been an active minority opposition to Fishbein in the A. M. A. This minority has become more vociferous in recent years until now they have finally wiped him out. While many are of the opinion that an attempt has been made to make Dr. Fishbein a scapegoat to cover up the reactionary policies of the A. M. A. which are unchanged, we do not hold with this viewpoint. We believe that the progressive forces in the A. M. A. have gained a first important step by getting rid of this man. We also believe that with this domineering figure out of the way, the ruling powers in the A. M. A. will be able to see more clearly the true picture of medical care requirements in this country. Clear thinking in the councils of the A. M. A. to arrive at proper conclusions will be possible with this man absent. After all, Dr. Fishbein is one of the most brilliant and most dynamic men alive in this country today, and the fact that he dominated the councils of the A. M. A. and ran the Association as a one-man show is no surprise to anyone who ha s observed him in action.

Pharmaceutical Research

THE search for so-called ethical specialties today is a swift race. Leading pharmaceutical manufacturers and others now have enormous research establishments which were practically non-existent not too many years ago. Furthermore, the manufacturers are, for the most part, working hand in hand with medical schools and hospitals in this research and development work. However, the surprising thing to many is the fact that when one company makes an announcement of the discovery, isolation, or synthesis of a new and important drug, several other companies immediately appear in the picture. This is due to the fact that most of the research laboratories know the important problems to be solved and several of them are always working along the same lines toward the solution of the same problem. The same knowledge is generally possessed by many of the laboratories but the final step or two is quite elusive. When one of them discovers the final step, the others are right there to jump aboard.

Pharmaceutical or Chemical Maker?

THE intensive research conducted by pharmaceutical manufacturers is largely responsible for these manufacturers engaging to an increased extent in the production of their own basic chemicals and other products. However, a number of the pharmaceutical manufacturers have recently entered the production of antibiotics which they formerly bought from other basic manufacturers. There has arisen here the question of just how far the pharmaceutical manufacturer should go in entering the field of the manufacture of chemical or basic products, and how far the chemical manufacturer should go in entering the field of the pharmaceutical manufacturer. Recently we were told that one of the largest pharmaceutical manufacturers had on its hands a $6,500,000 plant for which it had no use because of its determination to manufacture its own basic materials. In this case the company discovered a new and exclusive antibiotic. Rather than farm out the production to a basic manufacturer, the pharmaceutical manufacturer erected this expensive plant to produce the product itself. A short time later a synthetic method of producing the product was discovered and the expensive plant became useless. Now the manufacturer is looking for some operations to put in this vacant $6,500,000 plant.

The production and marketing of pharmaceuticals and the production and marketing of chemicals and basic materials are two entirely different businesses, and either one engages in the other one at his own peril. Naturally, pharmaceutical manufacturers can retaliate against chemical manufacturers who attempt to market pharmaceuticals by placing their business elsewhere. But chemical manufacturers also can retaliate against pharmaceutical manufacturers who enter basic manufacturing and sell the customers of the chemical manufacturers. The chemical manufacturers can enter mass production of each new promising specialty brought out by these pharmaceutical manufacturers, working the price down as low as possible, and then selling it to all comers who want to compete in this market which looked so promising to the pharmaceutical manufacturer who first announced it.

Export Act Passes House

THE Van Zandt Bill to amend the export provisions of the Federal Food, Drug, and Cosmetic Act was revised by the House Commerce Committee and passed the House on June 20. Although the committee eliminated from the bill the provision that an exporter must first secure the food or drug law of the foreign country to which he intends to ship, the bill actually compels export products to comply with the requirements of the law of this country which may not be acceptable to foreign countries. In other words the law shows no regards for the requirements of foreign countries, but seeks to force down their throats the requirements of the law in this country, whether or not these requirements are suitable to conditions of medical practice in the countries to which the goods are to be shipped. We fail to see what all the shooting is for on the part of the sponsors of the bill. We do not see that any revision of the present law is necessary. However, if further protection of exports are necessary, let us at least give the foreign countries what they know they need in the way that they want it. Certainly we should not try and force upon these people what we think they need—and that is just about what the Van Zandt Bill has been designed to do.

Pitman-Moore Golden Anniversary

CONGRATULATIONS to the Pitman-Moore Division of Allied Laboratories, which celebrated its fiftieth anniversary on July 1. In announcing the golden anniversary of the firm, President Kenneth F. Valentine said that on July 1, 1899, Pitman-Moore first opened for business under the name Pitman-Myers Company. The present name was adopted in 1911. First occupying small, rented quarters on the outskirts of the then little city of Indianapolis, the company erected its own plant in downtown Indianapolis in 1905. In 1924, a larger building was erected at the present site where the company now occupies 143,000 square feet, housing offices and laboratories for pharmaceutical production.

In addition to the Indianapolis layout, the company operates one of the world's largest biological plants on an 89 ace tract at Zionville, Indiana. Recently a 160 acre farm near the biological plant was converted into laboratories for research into both human and animal health problems.

Pharmacopoeia Plans

RECENT steps in the process of U. S. Pharmacopoeia revision include establishment of thirteen standards for antibiotics to succeed the government certification plan, Dr. E. Fullerton Cook, USP Revision Committee Chairman told members of the American Pharmaceutical Manufacturers Association last month. Further information divulged by Dr. Cook: Method for clarity of parenteral solutions is still under study; a number of additional vitamins, as well as five insect-repellents are to be added to the USP scope with a hearing on proposed additions planned for next Fall; about 280 items have been approved for the contemplated international pharmacopoeia, the first edition of which is expected to be published early in 1950.

Spend for Profits Says Hill

STATING that business men must continue to "spend for profits," although "needless expense must be eliminated to provide funds to finance projects to keep business moving ahead," Sterling Drug President James Hill, Jr., declared that "advertising is probably the most important of all means of spending for profit." Speaking at a three-day meeting of the company's standing committees at White Sulphur Springs, he said "that even though present conditions require more than usual avoidance of extravagance, we are not and should not be in an economy wave." With regard to advertising expenditures of his own company, Mr. Hill said: "At this time we see no reason why our advertising appropriation should not be the same next year as this year. We do not propose to cut any appropriations for 1950 which we believe may help to maintain or increase profits." He said further:

"Dollar profits, rather than the traditional percentages of profits or percentages of increase, is what business should seek. At the same time, the leaky faucets of needless expense must be stopped. Careless spending prevents proper investment of funds to accomplish needed research for development of new products, added production, increased sales, stable employment and that continued progress without which all business must inevitably fail."

Rexall Enters Ethical Field

CABOT Chemical Company, with offices in Los Angeles, has been formed as an independent subsidiary of Rexall Drug, Inc., for the development of ethical pharmaceutical specialties. The company is under the direction of P. K. Bates, Ph. D., who has been named president. Dr. Bates wasf ormerly director of Rexall's product department. G. W. Kusserow, Ph. D., former associate of Rexall's product development department, is vice-president in charge of research for Cabot, and F. E. Poole, M. D. Medical director for Rexall is also a vice-president of the new unit. The organization began operation of a pilot plant on July 1, initial work including production of materials for clinical studies. Research began approximately two year ago, and the company will have its own research, sales and merchandising operations.

All of which gives us cause to wonder how a company with major interests in one phase of the drug business can successfully engage in another phase which is entirely remote from the major one. Rexall was originally a manufacturing company, but as things developed, it became more and more heavily interested in the retailing and wholesaling aspects of the business. Rexall has long made a wide range of preparations, including most of the prescription items. The only outstanding thing that the company has lacked up to now is ethical specialties. Probably this company, along with many others, hopes to develop ethical specialties of outstanding merit which will give this company a real place in the pharmaceutical manufacturing branch of the industry.

The Appeal of the Truman Plan

THE Truman Compulsory Health Insurance Plan, as presented by Federal Security Administrator J. Oscar Ewing, is a formidable thing because of the direct appeals made to all interested classes, indicating that all these groups would be better off than they are at present. Those opposing the plan consider these appeals as "dust in the eyes of the unthinking," but the fact of the matter is that a great many people are willing to follow these lines of thought. It is true that these appeals will not develop as those who listen to them believe they will, but this does not stop a great many people from thinking that the particular appeal made to them will work out greatly to their benefit. Consider the strength of these appeals:

1. To the druggist: There will be more prescription business and more business in general done by the druggist. (Mention of the maximum that may be charged for a prescription is carefully avoided by Mr. Ewing.)

2. To the drug manufacturers: The Truman health plan will provide a widening of the use of drug products, greater stimulation for the use of medicine and, therefore, increased business for the manufacturers.

3. To the physicians: To young doctors just starting there is no need to buy a practice or to struggle for a comparatively long time trying to build up a practice. A doctor just starting out would have an assured income. Also to the 25,000 or 30,000 doctors in this country who have not made what is generally considered a success in the practice of medicine, Mr. Ewing's claim of "no unpaid doctor bills" has a strong appeal.

4. To the general public: The appeal of "free" medicine and "free" medical care for all is considered one of the most wonderful things that could happen. The average person does not stop to consider that this medicine is not "free;" that at least one member of each family must be on a payroll and pay a direct tax for this so-called "free" service, as well as an additional tax to provide the funds to be taken from general taxation receipts to provide the cost of the plan over receipts from the direct tax. Also 15 to 20 per cent of the people would not be self-employed or on a payroll and therefore would not be eligible for this service.

World Insulin Production Plentiful

THE World Health Organization states that insulin production now exceeds consumption in 55 countries including all major nations except Russia. Consumption of insulin in these 55 countries is placed at 10,465 million international units while present production is approximately 12,046 million units.

APMA and Hoover Proposals

THE proposal of the Hoover Commission that the enforcement of the Federal Food, Drug and Cosmetic Act be divided so as to place enforcement of its food provisions in the Department of Agriculture, and putting the Food and Drug Administration in a public health unit having to do with hospitals, was opposed by the American Pharmaceutical Manufacturers Association. Association Counsel Charles Wesley Dunn expressed approval of the Hoover Commission recommendation that enforcement of control over false and misleading advertising of the products of the industry be transferred from the Federal Trade Commission to the Food and Drug Administration. Mr. Dunn favors a cabinet department of welfare of which the Food and Drug Administration would be a unit having control over foods, drugs, and cosmetics.

FTC Usurps Authority

THE Federal Trade Commission continues to usurp the authority given by Congress to the Food and Drug Administration. In a recent Cease and Desist Order (No. 5430) against a vitamin product, the following statement is included:

"These representations are forbidden unless (1) they are 'expressly limited to those unusual cases in which such conditions are due solely to a very minor vitamin B_1 deficiency and where the long and continued use of said product as a food supplement in the quantities recommended may tend to overcome such conditions,' and (2) unless it is disclosed that 'such conditions are most frequently due to other causes' and that in such cases the product is 'ineffective.'" Regardless of whether or not this preparation contains quantities of the various vitamins sufficient to support many of the claims made in the advertising of the preparation, the FTC is using this type of language in all orders and stipulations affecting vitamin preparations. Further, it is being requested by the FTC that language of this meaning be included in the advertising of other types of products. A requirement that a manufacturer include in his advertising a statement to the effect that his product is "inneffective" is far more serious than the requirement that advertising include the statement: "Caution. Use Only as Directed." The "ineffective" statement would just about completely nullify the effects of the advertising and make it a complete waste of money.

Ammoniated Tablets for Teeth

STATING that "a majority of (ammoniated dentifrice) users believe in the ammonium ion factor in theory, even if they do not take advantage of it in practice," Purex Products, Baltimore, is now marketing the Anti-Cay Ammoniated Wafer to be placed in the mouth after meals like an after dinner mint. Theorizing that "people will not deviate from the habit of years—brushing the teeth upon arising and before retiring," Purex seeks to ride the ammoniated dentifrice wave by making it quite simple for people to properly condition their mouths after each meal without resorting to actual brushing of the teeth. As an added factor to convince parents of the efficacy of Anti-Cay for children, vitamin D is included in the tablet.

Certification Argument

A VERY sharp difference of opinion exists among pharmaceutical manufacturers regarding the matter of a general certification amendment to the Federal Food, Drug, and Cosmetic Act. There are those who are bitterly opposed to such an amendment, while there are others who say that it would be the most forward-looking action that could possibly be taken. Not in some time, if ever, have pharmaceutical manufacturers been so sharply divided on an important subject. Naturally enough, selfish interests are attributed to both sides. Those who have antibiotic specialties are accused of desiring certification for the reason that this gives government approval to their products and, as these products are exclusive with them, such certification can only benefit them. Then there are those whose labels have been built up over the years to a high degree of trust on the part of the physicians of the country. These people are accused of opposing certification solely for the reason that certification would give government approval to all products of the same type no matter what label the products are sold under.

Iodent Ammonia Tooth Paste

THE Iodent Company announces through its president, Dr. A. J. Lautmann, that it had discovered a method of incorporating ammonium compounds into a tooth paste, stating, "this is the first of the nationally-known dentifrice brands to offer a decay-fighting tooth paste." The Iodent product was pre-dated by at least two months by AmoRex, which of course was not offered by one of the "nationally-known dentifrice brands." Dr. Lautmann says:

"The importance of this new discovery to the public is emphasized by th fact that 7 out of 10 dentifrice users prefer a paste to a powder. The new Iodent tooth paste, used in the usual convenient manner, provides a safe, pleasant cleansing action while quickly killing the troublesome Lactobacillus Acidophilus germ believed to be the primary cause of tooth decay."

Vitamin D Patent Suit

ALLEGING infringement of U. S. Patent No. 2,441,091, issued May 4, 1948, and covering a method of preparing A-7-dehydrocholesterol, suit has been filed against Nopco Chemical Company, Harrison, N. J., by Philips Laboratories, Irvington-on-Hudson, N. Y. According to the Philips patent, provitamin D is produced by the bromination of a sterol, namely cholesterol, followed by the removal of elements of hydrobromic acid and the substitution of a double bond at the seven position of the sterol structure. The provitamin so obtained is then converted into vitamin D_3 by irradiation with ultra-violet light.

Observing the British Scheme

AMERICAN observers in large numbers have been going to England to observe the British medical system and learn what they can from it that might be helpful to the people of this country in deciding whether, and in what way, we are going to change our system. Relatively few people in this country realize that medical insurance schemes of one sort or another have been in existence in Britain since as long ago as 1911. Fraternal orders and others have long had coverage for all their members at so much per year per member. There have been changes over the years, but this final one really places the control of medicine in the hands of the government. Health Minister Bevan wants many additional powers which he deems necessary to make the scheme work, and John McPherrin, editor of the American Druggist, who spent six weeks in Britain studying the situation, recently told the Drug, Chemical and Allied Trades Section of the New York Board of Trade, that, in his opinion, Bevan should have these powers and controls if he is to be responsible for making the plan work. Mr. McPherrin and other observers learn on their visits to Britain that this medical plan is nothing but one part of the welfare state that exists in Britain today. You cannot separate it from the welfare state, and therefore you cannot consider it from the viewpoint of this country in its present political condition. Mr. McPherrin feels certain that government medicine of this sort cannot be run in this country either, without giving the government very complete powers over the various factors which enter in the problem of medical care. There are many who are now opposing the Truman health program for the simple reason that they feel certain that enactment of it would constitute a long step toward the establishment of a welfare state in this country.

The A.M.A. Cosmetic Committee

THE American Medical Association made the July issue of Readers Digest with its recent J.A.M.A. blast against hair preparations with which the Association launched its Committee on Cosmetics. While there is no valid reason why any cosmetic manufacturer should work with this committee and use its seal of approval on his packages and in his advertising, there may be some who will think that they are jumping ahead of their competitors by joining up. Right now we hear much whispering among the cosmetic manufacturers regarding competitors whom they feel are going to try and slip one over by going after A.M.A. approval. Some claim that even some of those who spoke the loudest against it are not to be trusted. However, thus far there are nothing but rumors.

Western Reserve Pharmacy School Passes

WESTERN Reserve University, Cleveland, announces the suspension of its School of Pharmacy due to lack of funds. The announcement states: "We had made a long and earnest effort to find sufficient financial support locally and nationally to enable us to continue the School on a high professional level. We have been disappointed to discover that actual support is so meager and the promise for the future so inadequate that we cannot go forward. We are unwilling to continue the School in the face of the critical financial problems involved, for to do so must mean the lowering of standards which would inevitably be to the discredit of both the University and the profession."

Waksman on Antibiotics

IN ACCEPTING the 1949 Research Award of the American Pharmaceutical Manufacturers Association, Dr. Selman A. Waksman, discoverer of streptomycin pointed out that "Credit for first recognizing the tremendous potentialities in this type of compound (antibiotics) must go to Dr. Dubos of the Rockefeller Institute for Medical Research. In 1939, he announced the isolation, from the culture of a spore-forming soil bacillus, of two compounds, gramacidin and tyrocidine, which he later designated as tyrothricin. Dubos combined, on the one hand, the training in soil microbiology and microbial physiology and, on the other, the enthusiasm and recognition of the possible utilization of microbial products for combating infectious diseases.

"Here was an old principle, well recognized in soil microbiology, but in applying it to the solution of a medical problem, Dubos started a new era of scientific research which has touched upon many fields of science, notably microbiology, chemistry, pharmacology and clinical medicine. Most notably it led to the development of new and great industries. This pioneering work branched out at once into three distinct pathways:

"1. The study of antibiotics of fungi, with the Oxford, England, group in the lead and the penicillins as the major and important products.

"2. The study of antibiotics of bacteria, with the Rockefeller Institute group in the lead, followed by the Columbia, Southern California and other university and industrial laboratories, and leading to the isolation, in addition to tyrothricin, of bacitracin, subtilin, polymyxin and various others.

"3. The study of the antibiotics of the actinomycetes, with the Rutgers group in the lead, later followed by other university and industrial laboratories, which resulted in the isolation first of antinomycin, streptothricin, streptomycin and grisein, and later of chloromycetin, aureomycin, neomycin, and others."

In the development of streptomycin, Dr. Waksman said:

"The comprehensive investigations in the production of antibiotics by actinomycetes were begun in 1939, before the outbreak of the war. They were carried out systematically without reference to, or one might even say, in spite of, the war. Certainly no Government support was forthcoming, although we actually asked for it. We were told that our investigations were of a purely theoretical nature and offered no immediate practical promise and, therefore, were hardly to be considered on a level that would justify support from government funds. We did receive some support from one or more philanthropic foundations. The greatest support, however, was given to us by an industrial organization, whose members were far-sighted enough to appreciate two facts: 1. That without basic research, practical applications will go only so far and no further. 2. Scientific facts are most likely to find immediate practical application when they are channeled into or supported by organizations that understand and are able to bring theoretical facts into practical use. The great progress of streptomycin is due largely to the collaboration between a group of enthusiastic research workers in a small university laboratory and an industrial group who appreciated the great practical potential of such investigations and were willing to place their staff of chemists, pharmacologists and engineers in helping to solve the practical or applied aspects of these problems."

Dr. Waksman's statements show clearly that without Dr. Dubos' work there would have been no antibiotics—a fact not generally mentioned. Also Dr. Waksman gives an insight into the probable difficulty of developing useful therapeutic aids under a system which puts all research and development work in the hands of the Government.

Ciba Sponsors Junior Achievement

A JUNIOR Achievement company is being sponsored in Summit, N. J. by Ciba Pharmaceutical Products. Under the guidance of Ciba executives, the Hill City Specialty Company has been organized by fifteen high school students selected by lot from more than thirty applications from junior and seniors of the Summit High School. The company was formed early in February, reached the break-even point within a month, and is being dissolved this month with distribution of profits.

Squibb Dedicates Curare Assay

TO FACILITATE inclusion in the U. S. Pharmacopoeia of its process for biological assay of curare, E. R. Squibb & Sons has dedicated to the public its patent covering that process, says Squibb Vice-president in charge of Research and Development R. J. Dahl. Since prior assay methods did not give assurance of establishing comparative potencies, clinical application of this promising drug on a general scale was not possible. This patent, No. 2,461,278, and granted to Squibb February 8, 1949, assures full development of the product.

The Truth on Draft Rejections

WITH reference to the drive for enactment of compulsory sickness insurance legislation, Dr. Ernest E. Irons, president-elect of the American Medical Association, recently stated.

"Selective service statistics are mishandled by assuming that the percentage of total rejections represented a cross section of the entire male population subject to the draft. The fact is that before the draft there were removed from the group 2,700,000 acceptable men who enlisted voluntarily. Another 35.5 per cent were deferred for essential occupation or dependency. Ten million of the remainder were examined from December 7, 1941 to December 31, and 3,600,000 were rejected. Of these rejections, 21.7 per cent were rejected for illiteracy, mental deficiency, and venereal disease; 43.26 per cent for mental disease, defective heart ailments, amputations—a total of about two-thirds of all rejections. By the most liberal estimates only about 20 per cent of the rejections were for preventable disease. Political medicine will not cure flat feet or illiteracy."

Spell It Thiamine

VITAMIN B_1 should be spelled thiamine, and not thiamin, according to Dr. R. R. Williams, who first synthesized the product. Dr. Williams suggested the spelling "thiamin" in 1937, shortly after he synthesized the product. Later, however, the U. S. P. added the final "e" to indicate the chemical characteristics of the product. Chemical and medical journals have now followed this lead.

A.P.M.A. Meeting

DR. T. G. KLUMPP

ADDRESSING a record convention of 350 members and guests of the American Pharmaceutical Manufacturers Association at the Homestead, Hot Springs, Va., Association President Dr. Theodore G. Klumpp, president of Winthrop-Stearns, proposed a new move toward what he described as "a constructive, higher order of self-regulation." He declared that the "therapeutic claims and the pharmacodynamic action of drugs" constitutes a "sphere of action, which has not yet been covered by any organized, over-all industrial group." He called for reorganization of the Combined Contact Committee of the APMA and the American Drug Manufacturers Association, which he said should be "strengthened and streamlined." In its present form the Committee is too large and unwieldy, to obtain maximum efficiency, said Dr. Klumpp, who added:

"The Combined Contact Committee of the two associations has proved to be a valuable instrumentality for the exchange of technical information between the Committee of Revision of the U. S. Pharmacopoeia, the National Formulary Committee, and the Food and Drug Administration. I recommend that this group, representing the industry as a whole, undertake a more extensive program of studies in the future and extend the scope of its activities.

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By and large, the scope of the Contact Committee should be confined, as it has been largely in the past, to questions bearing on the identity, strength, quality, purity and methods of assay of drugs and their designation on the labeling."

Dr. Klumpp also recommended creation of a Combined Medical Section, composed of physicians and scientists of both associations, to consider problems arising out of "differences of opinion concerning therapeutic claims and the actions of drugs." Many legal actions have resulted out of such differences of opinion, stated Dr. Klumpp, as the work of the Food and Drug Administration has developed, and particularly under the new law. He stated further:

"For some time it has been the opinion of many in the industry that an extension of the present cooperative relationship between our industry and the Federal Food and Drug Administration would be in the public interest and serve as a distinct advantage to the Government and the drug industry in their respective tasks. I believe that there are many regulatory problems that can be solved on an industry-wide basis. In my opinion, many legal actions can be avoided by prior consultation and conference between representatives of the Government and industry. I am sure that the objectives of good government can be accomplished more often than in the past by informal notification and conference, than by initial legal steps. It seems to me very important for our industry to study and express itself concerning common problems in this area, as well as in the sphere of identity, strength, quality and purity of drugs, which has been covered with reasonable success in the past."

While stressing the spirit of cooperation that has been achieved by the two

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THE PROPRIETARY WHITE SULPHUR

OPENING the meeting of the Proprietary Association at White Sulphur Springs, June 1, Association President Walter R. Beardsley, president of Miles Laboratories, pointed out that the Association thus far has not taken any definite stand on the question of compulsory health insurance. However, he said, there has been so much heat and emotional bias on the subject, the Association decided to have the facts presented to its members. Presentation of the facts included an address by Federal Security Administrator J. Oscar Ewing, chief government exponent of the plan in which he gave his views on the need for the plan, how it would be applied, and how it would work out.

Mr. Ewing said that voluntary insurance plans would never be sufficient because they cannot cover bad risks. He said there is no use building more hospitals or training more doctors unless there is sufficient purchasing power for medical care to support these facilities. This purchasing power, he said could only come from compulsory health insurance. He said that the Taft plan involves tremendous government expenditures and a "means test" and would therefore eventually lead to bureaucracy and socialization. With reference to this plan he added:

"We should have saddled upon us an army of bureaucratic officials poking their noses into our private business and demanding that we justify every penny we spend in supporting our families before they declare us eligible to receive vital health services. Such a system would inevitably degenerate into the most monstrous Government control of medicine. Here, truly, we should have 'socialized medicine' in its most abhorent form, with medical care for a large section of the American people a matter of public charity."

Mr. Ewing declared "that the A. M. A., or organized medicine, was not qualified to pass judgment on the question or to recommend what plan should be adopted since they had, over the years, opposed all progress in medical care. He said that they had opposed establishment of boards of health, reporting of communicable diseases, federal grants-in-aid, the TB program, group medicine as evidenced by the Mayo Clinic, non-service connected disability medical care for veterans, and voluntary insurance. In 1932, he said A. M. A. attacked voluntary insurance as "socialism and communism, inciting to revolution."

Under compulsory health insurance in this country

ASSOCIATION SPRINGS

as proposed in the Truman Plan, Mr. Ewing made the following predictions:

"Under this program, the drug industry stands definitely to gain in terms of volume of sales and profits. In other words, as we expand these services and the ability to purchase them there will be many, many more people throughout the country seeking and getting medical attention. And that means inevitably an increased market for all drugs and medicines —for proprietary remedies and medicinal specialties as well as pharmacists' preparations.

"What is more, this market will be expanded through the full play of private enterprise and competition will operate precisely as it does now. This is not a scheme, like the British scheme, which sets up a general approved list of products.

"As of course you all know, the provisions of the bill now before Congress provide payment only for the cost of unusually expensive prescribed drugs and medicines. These are the drugs and medicines a physician should feel free to prescribe, when necessary, without having to consider what, to the average patient, would be a prohibitive cost. But apart from the drugs and medicines used within the hospitals or in the course of the physicians and dentists practice, these are all it does provide payment for.

"As more patients are enabled to seek medical advice there will, of course, be a large increase in the prescription business of the local pharmacist. But there should also be a large increase, in the over-the-counter volume of your own products. There is no reason why a physician should not continue to prescribe the use of medicinal specialties. Nor is it likely the American people will give up their well-entrenched habits of relying, for their minor ills, on tested and useful proprietary remedies.

"Furthermore, please note that ultimately drugs and medicines will be the only things, in connection with the usual short-term illness, for which a man will have to dig down into his own pocket. Ultimately, all other expenses in such cases will be met by the insurance fund. A man will therefore feel freer to spend money for useful drugs and medicines than if these items represented only one of many costs of an illness.

"But the major point for you gentlemen to consider, it seems to me, is this: with the expansion and wider

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STAGES OF WOMAN'S LIFE FROM THE CRADLE TO THE GRAVE.
SACRED TO THE MEMORY OF
Yest she foreshews with mimic plays. The business of her future days.
Now glorious as a full blown flower; The heart of manhood feels her power
A husband now — her arms entwine. She clings around him like the vine
Now bearing fruit she rears her boys. And tastes a mothers pains and joys.
Like sparkling fountain "gushing forth," She proves a blessing to the earth.
A busy housewife full of cares, The daily food her hand prepares.
As age creeps on She seeks for grace Always to church and in her place.
Now second childhood loosens all her tongue. She talks of love and prattles with the young
A useless cumberer on the Earth — From house to house they send her forth

COURTESY THE OLD PRINT SHO

UP-TO-DATE ON HORMONE CREAMS

THERE is a definite relationship between the skin and the endocrine system. Especially important are the influences exerted by the sex hormones on the thickness, turgor, texture, color and blood supply of the human skin. Data relative to these hormonal influences, particularly those phases concerned with the topical application of estrogens and the use of estrogen-containing cosmetic creams, were reviewed in 1944 in two articles[1,2] appearing in this publication.

Since then a number of things have happened which make it advisable to bring this information up to date. For example, in 1945 the Council on Pharmacy and Chemistry of the American Medical Association[3] again issued a blast against cosmetics containing hormones. This statement, though made four years ago, takes on added importance in view of the rules promulgated by the recently formed Committee on Cosmetics of the A. M. A.[4] Also very noteworthy are a number of reports on the efficacy and safety of estrogen-containing creams. Highly indicative is the recently-published study of Eller and Eller[5]; this investigation being facilitated by a grant and a supply of testing materials from Bonne Bell, Inc. of Cleveland. Also important

are various rulings, such as that of the Louisiana State Board of Health, on the legal status of hormone creams.

As remarked by one observer,[6] eight years after the first estrogen-containing cosmetic cream was placed on the market, and about four years after the settlement of a lawsuit involving disparagement of one such product by the A. M. A., its Council on Pharmacy and Chemistry made another attack on this class of products. Not only does the Council's statement hint that the estrogenic creams might cause cancer, but that they may also upset the normal activity of the body by absorption from the skin. Such products, it was said, were marketed without evaluation by any "unbiased" group. "What" it was asked, "are the local effects, the general effects, and what may follow continued rise? Satisfactory data to support the answers offered by the promoters have not been provided."

As was well known in informed circles, the answers were then available in the files of both research men and manufacturers. It may or may not be significant that much of the carefully obtained data relative to the effects of estrogenic hormone cosmetic creams did not begin to appear in the medical press until about three years ago. Indeed, it was not until 1949 that any of this information appeared in an A. M. A. periodical. Even so nearly two years elapsed between delivery of the paper[5] and its publication.

With respect to the effect of long-continued use, one may point to the fact that, even excluding the first product placed on the market, a number of these so-called hormone creams have been available to the public for a number of years. In that time, during which many thousand jars of cream were sold and used, no report of adverse effects has appeared. It is perhaps quite obvious that had such untoward effect occurred it would have been well publicized. Competent observers, including some who oppose the use of these creams or are skeptical of their value, have acknowledged a lack of evidence with respect to harmful effects.

Indicative is a letter on the status of cosmetics containing hormones written by Commission P. B. Dunbar[7] of the Federal Food and Drug Administration. In this letter, which was published shortly after the statement by the Council on Pharmacy and Chemistry, he said:

"There has been a considerable amount of work on the carcinogenic properties of these materials. In highly susceptible strains of rats under very special conditions the administration of the estrogens has apparently produced carcinoma, but with ordinary laboratory animals and in all studies so far on human beings there is no evidence whatsoever that these products are carcinogenic.

"We have investigated the files of a number of firms producing these products searching for evidence of injuries. We have not found such evidence.

"To summarize, we have carefully received the literature and consulted with many experts and, as a result of this, have arrived at the conclusion that at this time there is not sufficient legal evidence to show that the use of estrogens in the amounts found in products of this class is dangerous."

More recently, in a discussion of the rule of hormones in dermatology, Hartman[8] warned that protracted estrogen stimulation by any route may lead to undesired effects. Nonetheless, this authority conceded that "the small dosage usually used in topical applications has never been shown to produce tumors and must therefore at present be considered 'safe'."

The several reports specifically devoted to the estrogen-containing creams have not only supplied pharmacologic and clinical data, but have given much valuable information on formulation as well. For example, as noted by Davis[9] after a review of several reports, it has been proved that creams with an estrogen potency greater than 7,500 to 10,000 international units per ounce are neither necessary nor justified. This, of course, is in line with the observations made by Goldzieher[10] in a table before the Society of Cosmetic on May 13, 1947. In his opinion the upper limit for cosmetic use of estrogen is 10,000 units per ounce of base. Higher unitage may cause systemic effects, which are undersirable. Conversely, less than 7,500 units per ounce may not produce the desired local effects.

In this connection it may be noted that for investigational purposes some workers have used higher proportions. Eller and Eller,[5] for instance, in part of their studies used preparations containing 15,000 units of estrogen per ounce of base. This was twice the concentration of estrogen present in the commercial product actually under investigation.

On the basis of experimental evidence there is a general impression that the natural estrogens are somewhat more efficiently utilized than the synthetic products.[2] However, both the natural or synthetic forms are satisfactory provided they are employed in the same unitage. In Goldzeiher's[11] clinical studies the effects were equally apparent in skin treated either with estradiol or stilbestrol. The changes were essentially identical in all cases.

Many investigators have proved that the skin can absorb estrogenic hormones in various degrees, depending on the vehicle or base in which they are incorporated.[2-6] With respect to cosmetic creams or ointments, any fatty base is considered satisfactory for topical application. Appropriate emulsion type bases for incorporating estrogens have been suggested by Malisoff.[1]

We now turn to the several published and unpublished reports on the effects of topically applied estrogens. In these carefully conducted studies, conclusions were seldom based solely on grass effects but included careful microscopic study of many biopsy specimens. Important and very indicative are Goldzieher's[10,11] observations and views. He has pointed out that, of all the endocrine products, estrogen is the one hormone singularly fitted for cosmetic administration. The

skin, says he, is particularly in need of estrogenic stimulation. This is demonstrated by the atrophy of the skin in the castrate and menopausal woman.

He explains that topical application affects the skin to a much greater degree than oral or parenteral administration because the estrogen is not lost through body excretion, is not deactivated by the liver, and is not used preferentially by the genital tissues or other organs with higher priorities than the skin.

In Goldzieher's studies, the test object was the skin of five elderly women who showed advanced senile atrophy but no other dermatologic changes. In two cases, estradiol was used; the potency of the ointment being 10,000 international units per ounce. In the other three cases, in ointment containing 1 mg. of stilbestrol per ounce was used. The ointment base, without estrogen, was applied to three control cases.

After six weeks' application, biopsies were made and the removed tissues were sectioned and stained. Examination of the stained sections showed that there was a pronounced regeneration of the surface epithelium. The number of cell layers was increased and the wavy configuration of the epidermis was restored. The water content of the estrogen-treated skin appeared greater and the elastic fibrils were more numerous. Biopsies from the skin of the control group showed no appreciable changes.

Although his work was done on elderly women, Goldzieher has stressed that the need for estrogen in the skin is not limited to castrate or menopausal women. Unsatisfied demands of the skin for estrogen are well conceivable in spite of actively functioning ovaries. In his opinion there is no need for a woman to wait until skin changes actually occur. Indeed, the early use of estrogen cream may delay the skin changes that are noted in the older woman.

The results of work by other investigators, though unpublished in detail, were well indicated during a hearing[12] before the Louisiana State Board of Health in 1946. For example, Dr. H. Sharlit of New York City testified that the use of estrogen-containing creams will cause the skin to take on a smoother and full appearance. In his opinion this effect is produced by the skin taking and holding an additional amount of water, so that the effects of estrogens is really a hydration of the skin. More specifically, estrogenic hormones dilate the capillaries of the skin and increase the water content of the collagen bundles in the true skin.

This, Sharlit pointed out, will naturally give the skin a more youthful appearance. The skin will be more succulent and the lines will be finer, thereby artificially abolishing wrinkles. This, however, is a temporary effect which can be maintained only if the application of the cosmetic is continued.

At the same hearing further evidence was presented by Dr. Eugene F. Traub, who is Professor of Dermatology at the University of Vermont and Associate Professor of Dermatology at Post Graduate Hospital, Columbia University, in New York City. He reported that he and his associates had selected several groups of women, ranging in age from 35 to 55 years, for their experiments. They were given a hormone cream to use on the back of the hand and that side of the face and neck. A control (hormone-free) cream was applied to the back of the other hand and on the same side of the face and neck. Such applications were made for periods of at least six months. All the women were under the observation of several physicians and were also under the constant supervision of a registered nurse.

It soon became apparent that the side treated with the estrogen-containing cream was better in appearance. As the experiment progressed this effect became more and more evident. Despite the fact that practically all of these women were housewives who frequently immersed their hands in water, it was found that the side on which the hormone cream had been used appeared better in a little over 90 per cent of the 50 women taking part in the experiment. This was quite evident because the skin lines were less noticeable and the skin generally appeared more succulent or turgid than on the control side.

In addition, in some cases, there seemed to be a dimunition of "pigment blotches" or "senile freckling" or both. Without going into details, Traub stated that the gross observations were confirmed by examinations of biopsy material taken before and after the experiment was concluded.

Considerable interest has, of course, been focused on the recently-published, indicative report of Eller and Eller.[5] Their study of cutaneous effects of the topical application of estrogens was conducted on a group consisting of 36 persons, of whom 30 were women and 6 men. Some idea of the painstaking detail of this study is evident in the fact that 321 biopsies were made; an average of about nine biopsies per subject.

As a result of these investigations, it was found that estrogens exerted a definite and consistent proliferative effect on the epithelium of the skin. The epidermal proliferation was clear cut and occurred consistently enough to be significant. In summarizing their report, Eller and Eller state that the topical application of natural estrogens has a direct effect on the epidermis of postmenopausal women. No changes in the skin were found in young women with normal endocrine function or in any of the men studied. It was found that the effect on the epithelium was proportionate to the concentration of estrogen in the ointment and to the duration of contact. Ointments containing 7,500 and 15,000 international units per ounce and applied by inunction regularly produced definite and consistent proliferation of the epithelium. These effects were first noted at some time between 10 and 30 days, reached their maximum in 30 to 50 days and did not progress further after that.

In reporting the total histological picture of the work done by Eller and Eller, Dr. L. W. Smith, formerly

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PERSONNEL AND APPEAL AT PROFESSIONAL MEETINGS

By WILLIAM M. MONDAY*

THE selection and training of personnel and the types of appeal used at conventions are of equal importance. It would be foolish to select top-notch personnel without properly training them, just as it would be poor practice to place well-trained men in an unattractive convention booth.

Let's begin with the selection of men. It is essential that they be courteous, well-groomed, have good speaking voices, be well-informed and tactful. These attributes are bound to impress the physician.

On the other hand, if the men are careless, slovenly, uninterested or too aggressive, they are likely to discourage physicians from stopp ng at the booth. Therefore, in order to get the most out of our investment insofar as personnel is concerned, we consider the following requisites:

1. *EXPERIENCE.* Although an occasional rookie may be able to do a good job, most representatives who are chosen for a convention are well-seasoned men. They usually have demonstrated their ability in the field and are able to handle any situation that might come up.

2. *SPEAKING VOICE.* Those in attendance at conventions must have good speaking voices. The noise and confusion which are usually present require that the men be articulate.

3. *GROOMING AND APPEARANCE.* These points, which are always important in a salesman, are particularly so at a convention where there is plenty of competition from other exhibitors. Physicians, in walking from booth to booth, are quick to spot attractive exhibits and well-groomed attendants. The over-all appearance, therefore, should be inviting to them.

4. *STAMINA.* While a man is usually able to carry on his regular routine, the constant pressure of being on his feet all day at a convention is not always easy. To overcome this, we stagger the hours our men work at a booth. Even so, they must have plenty of stam'na to be able to "take it."

5. *NEATNESS.* Everyone will agree, I am sure, that a neat, clean and attractive booth is extremely important. We select men we know will keep literature and samples, registration cards and other paraphernalia in good order.

6. *DEPENDABILITY.* Conventions present many temptations for representatives. This is especially true when the men are away from home. A certain amount of after-hours play is expected, but we have found it best to select men who can be trusted not to abuse such privileges.

7. *PRODUCT KNOWLEDGE.* When doctors are detailed at conventions, the time a man has to tell his story is more limited than in a doctor's office. It is necessary that he have the ability to pin-point ideas. This requires a thorough knowledge of his own as well as competitive products.

8. *SALESMANSHIP.* A sales talk at a convention booth is frequently given under trying conditions. A man must be able to think on his feet. He should also be able to handle himself with poise and assurance. By this I do not mean that young, inexperienced men should not have the opportunity to attend conventions. As a matter of fact, a large convention may provide a valuable training ground for them. They should, however, always work with experienced representatives.

Now, in addition to these requisites, we are also guided in our selection of men by cost factors. Wherever possible, we try to assign local men to a convention. This eliminates or reduces transportation and hotel expenses.

For large and important meetings we frequently put a Division Manager in charge. Whether Division Manager or salesmen, it must be remembered that men who attend a convention cannot do their regular field work at the same time. Furthermore, to take top-flight men off their territories may cost more than some conventions are worth.

Insofar as the number of men who are assigned to a booth is concerned, we try to limit it, depending on the size of the booth and the anticipated attendance. For an eight or ten foot booth, two men, and possibly a third to relieve at lunch time, are usually enough. Larger booths and meetings sometimes may require four or five men.

For companies that exhibit at a large number of conventions, the use of special convention teams is probably the ideal way to handle the problem of staffing a booth. Such teams usually include men who are technicians or specialists. For instance, it is common practice among pharmaceutical firms to have a medical consultant present. He is better qualified to answer the difficult questions sometimes asked by physicians. In such cases, good team work is essential.

(*Continued on page 113*)

*Hoffmann-LaRoche Inc., Talk presented at Trade Show Conference, Hotel Statler, New York City, May 26, 1949.

MANNEKIN PIS, BRUSSELS PHOTO COURTESY BELGIAN GOVERNMENT INFORMATION CENTER

MANDELIC ACID

By GEORGE H. SCHNELLER*

THE enthusiasm with which mandelic acid was received upon its introduction as a urinary antiseptic in 1935 waned several years later with the appearance of the sulfonamides with their spectacular effectiveness against a great variety of infections not merely urinary but also systemic. However, experience has shown that valuable as the latter drugs are, there are limitations to their effectiveness against certain frequently encountered urinary pathogens. Recent authoritative clinical re-evaluations have confirmed the value of mandelic acid as a safe and effective bactericidal agent, useful in the majority of cases of urinary infections. In view of these developments, a review of mandelic acid therapy appears appropriate.

*Director: Pharmaceutical Application, Calco Chemical Division, American Cyanamid Company.

The events leading up to the introduction of mandelic acid for the treatment of urinary infections can be briefly summarized as follows: It had been shown as early as 1917 by Shohl and Janney[48] that the growth of colon bacilli in urine was retarded when the pH level was 5 or less. In 1931, Helmholz[22] and Clark[9] introduced the ketogenic diet as a means of treating urinary infections. The rationale was based on the previous observation that the urine of diabetic patients with ketosis and of epileptic patients undergoing ketogenic treatment was less subject to bacterial decomposition than normally. The regime produced excellent results and thitherto intractable urinary infections were cured. However, the diet was unpalatable to many patients and therefore required strict supervision and preferably hospitalization. Moreover, the diet upset the normal physiological state of the patient and was contraindicated in certain conditions. The basis of the effectiveness of the diet was the presence in the urine of some specific bactericidal substance. In 1933, Fuller[21] showed that this substance was β-hydroxybutyric acid. This acid was found ineffective when given orally, being rapidly and completely oxidized and not excreted as such.

Rosenheim,[42] therefore, examined a considerable number of related substances in a search for one which would exert a similar bactericidal effect upon oral administration. He found mandelic acid the most effective in vitro. Subsequent clinical studies by him and then by others soon established the drug as a valuable therapeutic agent in the treatment of urinary tract infections.

Bacteriology

Mandelic acid is effective against those species of bacteria which are responsible for the majority of cases of urinary infection. These include Escherichia coli, Aerobacter aerogenes, Streptococcus faecalis, and species of the genera Pseudomonas, Alcaligenes, Salmonella and Shigella. While Proteus is inhibited by mandelic acid under acid conditions, its growth in urine is accompanied by the hydrolysis of urea, and the resulting alkalizing effect prevents the drug from exerting its full influence. The sulfonamides, which are effective in alkaline media, are indicated in this case. On the other hand, the sulfonamides are ineffective against Streptococcus faecalis, while mandelic acid is specific in this case. These points emphasize the necessity of accurate bacteriological diagnosis for most effective therapy. Other important species of Streptococcus, as well as of Staphylococcus, are also susceptible to mandelic acid.

Carroll and his coworkers[8] found that urine at pH 4.5 is in itself bactericidal. However, at the pH levels practically attainable in vivo, acidifying agents alone are incapable of eliminating urinary pathogens.[4,42,44] Rosenheim[42] took urine ranging in pH between 5.1 and 6.6 from patients suffering from urinary infections, and after incubation for 24 hours, found that it contained between 6 million and 176 million organisms per cc., the number of organisms increasing with increasing pH. Samples of the same urine to which 1 per cent mandelic acid was added before incubation were free of organisms when the pH ranged between 5.1 and 5.5. The samples at pH 6.3 and 6.6 had .09 and 1.08 million organisms per cc. respectively. Similarly, urine obtained from patients 3 hours after the administration of 4 grams of mandelic acid, and incubated in the same way, was free of organisms at pH 5.05 and 5.5, but contained 12 million and 144 million organisms per cc. at pH 6.3 and 6.8 respectively.

These results were confirmed in general with a considerable number of bacterial species by many workers.[2,5,25,26] Early reports were sometimes conflicting because of the variation in the resistance to the drug on the part of different strains of the same bacterial species. However, Carroll and Lewis[6] generalized the salient points of the therapy. They showed Escherichia coli, which constitutes the invading organism in 86 per cent of urinary infections, to be killed by low concentrations of mandelic acid, even with a pH as high as 5.5. Staphylococcus aureus and albus were susceptible to higher concentrations at low pH levels. Proteus vulgaris was killed by a concentration of 1 per cent at a pH level of 5.5. Pseudomonas pyocyaneus and Aerobacter aerogenes were also susceptible. These workers pointed out that species of Staphylococcus and also Pseudomonas aerugnosa are capable of hydrolyzing urea as has been mentioned in the case of the genus Proteus. This might result in failure of mandelic acid therapy, although if a sufficiently low pH level is maintained, mandelic acid may be expected to kill even these organisms.

Helmholz and Osterberg[26] readily obtained urinary concentrations ranging from 0.25 to 1 gram per 100 cc. by administering suitable doses of sodium mandelate and found the urine bactericidal for Escherichia coli, Aerobacter aerogenes, Pseudomonas aeruginosa, and Proteus vulgaris.

Not only the identity of the infecting organism but also the clinical condition prevailing must be considered in predicting the response to mandelic acid therapy in any given case. Difficulty in clearing the urine of microorganisms may be encountered in cases of urinary stasis due to obstruction in the form of a cyst, stone, tumor, etc. After the obstruction has been removed surgically, a favorable response may be anticipated with mandelic acid therapy. However, the drug has been found effective even in cases presenting marked obstruction.[16,23]

Dosage and Method of Administration

Mandelic acid is bactericidal to most organisms when its concentration in the urine ranges from 0.25 to 1 gram per 100 cc. and the pH is correspondingly between 5.0 and 5.7.[26] These conditions can be secured clinically by the administration of 12 grams daily together with the necessary amount of acidifying agent. This is the dose recommended by the majority of

(*Continued on page 76*)

CONTROL SYSTEMS IN

By HARRY HILFER

IN SETTING up suitable controls over cosmetic manufacture it must first be decided what the function of the control should be. The control laboratory in its broadest sense is the hub of all manufacturing activity, since its primary function is one of standardization. As far as the finished material is concerned the control laboratory must be sure that it is within the specifications of the previous batches made. Methods for sure determination may be easily set up and made part of a routine and the laboratory may easily determine whether or not the batch tested is within the required specifications. In its most simple terms, this is the function of the control laboratory. In order for it to function more efficiently it must also make necessary recommendations to bring a batch within the required specifications if it is outside of it. This function becomes more difficult since the fault could be with one of the raw materials used or for countless other reasons. To cover these variables the control laboratory must therefore become a part of every manufacturing, purchasing and packaging operation in the plant as well as the development laboratory.

If we are to start at the beginning of the control operation we should start with the development of a new product by the research and development group. When it has passed the qualifications placed on it by this group insofar as function, stability, etc., specifications must be determined for the raw materials used in the product. The idiosyncrasies of the new material must be examined in relationship to the raw materials being used. When these have been determined it would then be possible to run controls on the chemical or physical properties of these substances as the finished product so that its proper functioning may be assumed. In other words the same tests need not apply on two different formulations. One of them, for example may contain triethanolamine whose presence in the amount called for is necessary in strictest limits, in this case within limits of 0.1 per cent. Its presence in another cream may not be as functionally important and perhaps a qualitative test would be all that would be necessary.

In a shampoo, where foaming properties are important, control should be made on foaming properties as well as pH etc., though a soil test need not be run, since in most cases if several characteristics are within specifications, it may be assumed that all are within specifications. In any case controls should be set up as a check on obvious functions of the product.

For continuous standardizations, the best check is on the raw materials, and since the same materials may be used in a multitude of varying products, all these characteristics should be checked. By so doing, subsequent trouble could be avoided in production and control of finished product. This same system should extend to packaging materials particularly for those used in lipsticks etc. In theory, the package may be perfectly suitable for the cosmetic product but it is always best to be sure by testing against it under conditions of consumer use and shelf life. When found to be satisfactory, specifications should be established so that future shipments of the containers could be checked against the orginal. Testing of containers against contents cannot be underestimated. In the author's own experience, a plastic lipstick case was being considered because time was important. The sale had all but been consummated when it was tested against the stick on the laboratory's insistence and it was found that Ammonia fumes emanating from the case caused the lipsticks to fluoresce and rendered them unusable. The function of the control laboratory may therefore be divided into two broad catagories, raw material control, and manufacturing control, both of which have numerous subdivisions. We will first consider the raw material control.

Raw Material Control

The primary reason for controls on raw materials is to assure the standardization of the finished batch. Any other considerations will ultimately become part and parcel of the primary one. In cosmetic manufacture there are perhaps fifty materials in common use and better than three hundred all told that are used. They comprise most of the different chemical classifications, with esters perhaps the most predominant one. In the interest of time, it is not feasible to examine each of the substances for all its chemical and physical properties, so the most important are chosen and a routine set up for their examination.

The term esters comprises a long list of raw materials including beeswax, spermaceti, carnauba wax and other vegetable and animal waxes, as well as the fixed oils such castor oil, hydrogenated cotton seed oil and others. In addition there are many of the essential oils which will not be considered at this point. There are many synthetic esters now commonly used such as glyceryl mono stearate, butyl stearate, iso propyl myristate. These compounds all are capable of reaction with Potassium hydroxide to yield the saponification number. The saponification number and the limits within which it should fall, have been thoroughly located by the Scientific Committee of the T. G. A., and specific information may be obtained from their bulletins. The same is true of the Iodine numbers and free fatty acid determinations on the materials.

These determinations are relatively easily performed and should be true on all esters. Many substances have properties peculiar to themselves which make

their use specific. The control system should therefore take full cognizance of these properties and include them. Lanolin has a high cholesterol content and since its presence in a fixed amount governs the use of lanolin, its determination should be made. Actually a cholesterol determination, if the true amount is desired, is rather a difficult and tedious operation. There are several methods however which would give a good relative value as compared to the original sample, which in a control system, is wholly adequate. Such a method is the well-known Liberman-Burchard reaction where advantage is taken of the colorimetric change caused by the reactions of cholesterol dissolved in chloroform, treated with Acetic Anhydride and Sulfuric acid. The intensity of the green color produced can be measured against a standard by means of a Colorimeter.

In examination of the hydrophyllic esters such as glyceryl-monostearate and others, the hydroxyl value is of greatest importance since this is a measure of its hydrophylic properties. In most common use, is the pyridine-acetic anhydride method, where the material after having been freed of any free glycerol is dissolved

Such a treatment is specifically called for in the examination of the hydrophylic agents since the fatty acid mixture is as important as the hydroxy value in its functional use.

I have found it useful to run a hydroxy value on beeswax, usually a determination not employed, since the ratio of free hydroxy groups to free cerotic acid is of utmost importance in its functional use.

The use of various petroleum fractions and other hydrocarbons is great enough to warrant their proper treatment by the control laboratory. A melting point determination in the case of the waxes and a viscosity determination for the oils and petrolatums, coupled with a color determination with sulfuric acid usually is sufficient. In the oils, perhaps the most significant characteristic is the viscosity.

Examination of the various alkalies used as soap formers in cosmetics would include, borax, Sodium carbonate, sodium hydroxide triethanolamine and other amines, potassium carbonate and hydroxide. All of these are checked by titration against a standardized acid solution.

Homectants, such as glycerol and propylene gluco

MS IN COSMETIC LABORATORIES

in chloroform and treated with a standardized pyridine acetic anhydride solution and then excess acetic acid determined after first converting all remaining acetic anhydride to acetic acid with water, by titrating with Sodium hydroxide. A blank is also run on hydrophylic agent so a proper correction made be made for free fatty acid and a blank also run on the pyridine-acetic anhydride solution from which the titrations are calculated.

A substance such as Isopropyl mysistate is used because of its low viscosity, a viscosity determination is therefore indicated here. In addition to all these determinations, the melting point particularly of waxes is of utmost importance, since their primary importance is to increase the melting point. Color and odor should be compared against an accepted standard.

In all esters if possible, the fatty acids should be recovered after saponification and after suitable washing a melting point obtained on them. This check coupled with the saponification number, is a reliable check against the use of a different ratio of fatty acids, which would still give the same saponification number from that incorporated in the standard. Both the saponification number and melting point of the fatty acids will seldom check with the original if there is a pronounced difference in the ratio of the fatty-acids of which it is composed.

are checked against their specific gravities and hydroxyl values.

A large number of cosmetic preparations include insoluble powders which are important because of their physical properties, rather than their chemical. Talc for example, occurs in several different forms, where differences occur in colors and particle forms and size rather than in the intrinsic molecule. It should be therefore checked for color and for its "sparkle" content primarily. Apparent specific gravity is also of utmost importance because the container is usually made to hold a fixed quantity and if the apparent specific gravity should vary it would be felt in the final packaging. Talcs also contain varying percentages of chalk and iron. These should be checked as well. My own experience has been that most of the talcs available commercially resembled—in their chemical structure—the old Italian Talc—which contained a larger amount of silica and almost no aluminum oxide as compared to the French Talc which contained a sizable amount of Aluminum oxide and a greater amount of Magnesium oxide—as well as more water of hydration.

Kaolin should be examined much a talc with special emphasis on bulking properties.

Zinc oxide may be titrated directly. Its apparent

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DR. DUGGAR, WHO ISOLATED THE MOLD FROM WHICH AUREOMYCIN IS PRODUCED.

AUREOMYCIN

By M. A. LESSER

PHOTO COURTESY LEDERLE

A377 ON THE GLASS INDICATED THESE "BUTTONS" IN THE DISH ARE STREPTOMYCIN AUREOFACIENS.

IT IS just a little over a year ago that the first chapters in the story of aureomycin were given to the scientific world. The sixteen papers read before the New York Academy of Sciences on July 21, 1948 gave a very clear picture of the tremendous amount of work that had gone into the discovery and development of this view antibiotic. In the months since then many new chapters have been added to the story of aureomycin and many more are being written.

Aureomycin is the result of a systematic search for new antibiotics. A comprehensive screening program, involving hundreds of soil samples from which were assembled thousands of stock cultures, eventuated in the isolation and large scale testing of aureomycin. As pointed out by Duggar,[1] who is credited[2] with the discovery of the new, potent antibacterial agent, aureomycin was so named because of its golden yellow color and the fact that it is produced by a species of fungus now known as *Streptomyces aureofaciens*.

There is much to be learned concerning the chemistry of aureomycin but from the studies of Broschard and his associates[3] it is a weakly basic compound which contains bath nitrogen and nonionic chlorine. Analysis shows that it also contains carbon, hydrogen and oxygen and that it has a molecular weight of 508. It said[4] that aureomycin is a crystalline substance of sufficient purity to warrant dosage in terms of weight rather than units. It is chemically amphoteric and both its hydrochloride and its sodium salts are water-soluble. It is provided as the hydrochloride for both laboratory study and clinical use.

Aureomycin is highly stable in the form of a dry powder. In sealed ampules and in capsules it has maintained its potency apparently unaltered for at least seven months at room temperature. It has also maintained its potency for at least two weeks when kept at high concentrations in distilled water at pH 4.0, at either incubator or ice box temperatures. It loses potency very rapidly, however, in a slightly alkaline medium, and when kept at low concentrations in broth, serum or blood agar at 37°C. and somewhat less rapidly at 4°C.[5,6]

Bacteriologically, aureomycin is a very interesting and quite versatile substance.[7] It has a broad antibacterial spectrum; its action being bacteriostatic rather than bactericidal.[8] It is effective against gram-negative and gram-positive organisms. As noted by Finland, Collins and Paine,[6] strains of hemolytic streptococci, pneumococci, gonococci and meningococci were almost completely inhibited by aureomycin in concentrations of one microgram per cc. or less. Concentrations of up to 25 micrograms per cc. were needed to inhibit staphylococci and most strains of gram-negative bacilli, including typhoid and other Salmonella. On a weight basis, aureomycin was less effective than penicillin against most of the coccic organisms, but was about as effective as streptomycin against most of the gram-negative bacilli. Noteworthy is the finding[9] that aureomycin is active against certain penicillin-resistant organisms as well as against streptomycin-

resistant organisms. Indeed, organisms which have become streptomycin dependent respond readily to aureomycin. Especially important was the discovery[10] that aureomycin is highly effective against most strains rickettsia, as well as viruses of the psittacosis-lymphogranuloma venereum group.

Intramuscular injections of aureomycin hydrochloride dissolved in distilled water are very irritating due to the high audity of the substance. This may be overcome to some extent by the use of proper buffers, by incorporating procaine with each injection or by using both measures.[11] With a few exceptions,[12] however, most clinical investigations have used the oral route of administration and have obtained good results.

Not only is aureomycin effective by month, but it is also relatively nontoxic, when given orally. In pharmacologic studies. Harned and his associates[13] found no evidence of chronic toxicity when mice, rats and dogs were given large oral doses every day for twelve weeks. In the clinical studies, no toxic effects other than occasional very mild symptoms were reported. The commonest complaint during large oral doses of aureomycin, say Finland and his coworkers,[6] was looseness of the bowels, with frequent and bulky stools, but true diarrhea was uncommon. Bowel action returned to normal when drug treatment was discontinued or when the dosage was temporarily decreased. It is of interest that the diarrhea which was present in some patients improved while they were taking aureomycin.[11]

Nausea and occasional vomiting occurred in a few patients, but these symptoms could not always be related to the treatment. Pertinent in this connection is Long's[14] observation that this nausea can be easily controlled by the administration of preparations containing aluminum hydroxide. Spink and his collaborators[15] mention the occurrence of an abrupt rise in temperature in some patients, sometimes accompanied by a shocklike picture, in a few patients given aureomycin. Although some apprehension was felt, no serious consequences followed. Although patients may become allergic to aureomycin as has happened with other antibiotics, reports of sensitization or allergic reaction to the new agent have not appeared as yet.[14]

Particularly noteworthy is the finding that no significant tendency to the development of bacterial resistance has been shown with aureomycin. This, of course, is in marked contrast to certain other antibiotics. In indicative studies,[5,6] all organisms of the same species isolated from the same patient before, during, and after treatment with aureomycin for periods up to a month or more were equally sensitive to the antibiotic.

As noted by Long,[14] it is too early in the history of aureomycin to establish accurate dosage schedules for the administration of this antibiotic. It is likely, says he, that the dosages currently being used will eventually be proven to have been excessive. At present the antibiotic is being supplied in capsules each containing 250 mg. or 50 mg. of aureomycin. For the topical treatment of ophthalmic conditions vials are provided, each containing 25 mg. of aureomycin hydrochloride mixed with 25 mg. of sodium borate and 62.5 mg. of sodium chloride. The requisite solution is prepared by adding 5 cc. of distilled water. The ophthalmic solutions should be made up fresh every two days.

The versatility of aureomycin is well indicated by the member of conditions for which it has been employed successfully. According to one recent review,[16] aureomycin is highly effective against such rickettsial diseases as Rocky Mountain spotted fever, rickettisialpox, Q fever and typhus fever. In addition, it has proved effective in certain diseases which are now believed to be rickettsial in nature, including lymphogranuloma venereum, psittacosis and possibly other similar diseases. Primary atypical pneumonia, a disease of unknown cause, often responds quite dramatically to aureomycin. Additionally, certain bacterial infections, previously resistant to other forms of chemotherapy, have been attacked successfully with aureomycin. Among these are acute brucellosis, resistant staphylococcus infections, and infections caused by the "coli-aerogenes" group of bacteria which are common in the intestival tract. There is some evidence also that aureomycin may be useful in the control of typhoid fever.

Aureomycin has proved highly effective in many eye infections, including those of a viral-like nature such as inclusion conjunctivitis, follicular conjunctivitis and herpes of the cornea. Important, too, is the fact that the drug may be prescribed for infections that have developed resistance to penicillin, streptomycin and the sulfonamides and for patients showing severe sensitivity to these drugs.

From many laboratory and clinical studies there is growing evidence that aureomycin is provided with potent antirickettsial properties.[16,17] Aureomycin has proved to be a "very effective" drug in the treatment of Rocky Mountain spotted fever, a severe infectious disease which has presented an extremely difficult therapeutic problem.[18] Patients with the disease "appeared to recover dramatically" after Dowling and his coworkers[19] instituted aureomycin therapy. Others[20-21] have obtained similar good results. This, in the treatment of 13 cases of Rocky Mountain spotted fever with aureomycin, Ross and his associates[22] observed that the temperature subsided rapidly and that striking clinical improvement was observed in all of the patients. No toxic effects from the drug was noted. Comparison with para-aminobenzoic acid (PABA) indicates that aureomycin is the more effective agent.

Q fever has become a real problem in California and there is a definite need for an effective therapeutic agent to combat this disease. While it is too early to say that aureomycin fully meets this need, there is clinical evidence[23] that oral aureomycin therapy offers considerable promise in the treatment of Q fever. In several exceptionally sick patients, the antibiotic causes

symptomatic improvement, sometimes quite striking, soon after therapy was begun. In most cases the duration of fever was short.

There are indications that aureomycin will prove to be a valued aid in the therapy of epidemic typhus or Brills disease.[24] Although the disease has an almost negligible mortality rate, it is severely incapacitating. Hence the interest in the prompt and excellent results obtained with aureomycin in a patient severely ill with this disease. When treated with the antibiotic, the patient became afebrile and asymptomatic within 48 hours.[20]

The experimental work of Wong and Cox[10] points to the possibility that aureomycin may be of value in the treatment of rickettsialpox. This is a relatively new disease, an outbreak of which occurred rather recently in New York City.

There is evidence that aureomycin is capable of producing marked improvement in patients with lymphogranuloma venereum. Since a large proportion of those acutely afflicted with this disease become chronic sufferers of a progressive, fibrotic and destructive process, the need for an effective drug is quite apparent. In their tests on a variety of conditions to determine amenability to the antibiotic, one group of workers[9] observed a case of bilateral lymphogranuloma inguinale which progressed quite favorably on aureomycin therapy.

Much more indicative however are the 35 cases studied by Wright and his associates.[25,26] The results were so satisfactory that they came to the conclusion that aureomycin is a superior form of therapy for the lymphogranuloma verereum virus infection. This antibiotic also proved very effective against the secondary bacterial invaders present in this disease. A follow-up of 14 patients showed that the curative effects of aureomycin persist after treatment has stopped. It is not surprising, therefore, that they consider auromycin to be the treatment of choice for this so-called "minor" verereal disease.

Because of the unusual therapeutic range and low toxicity. Wright and his collaborators[26] decided to try aureomycin in patients suffering from granuloma inguinale. They found that the trial was well justified. Aureomycin, they observed will heal ulcerations produced by the causative agent of granuloma inguinale. Similar observations were reported by Grcenblatt and his colleagues[27] following oral aureomycin therapy of streptomycin-resistant granuloma inguinale. It is interesting that three of their four patients failed to respond to intramuscular injections of aureomycin, but responded well to oral administration.

Studies[10] on experimental animals afford evidence that aureomycin has marked therapeutic activity against the virus of psittacosis. This dangerous disease, also known as "parrot fever," is comparatively rare so that no clinical trial has yet been made.

Following their earlier cautious statements, scientists are now expressing greater confidence in the ability of aureomycin to cope with primary a typical pneumonia. Although sometimes called "virus" pneumonia, the cause of the disease has not been isolated and its etiology remains unknown. Significant however, is the fact that the disease has occurred with increasing frequency over the past 15 years.[28]

The need for careful statements with respect to the efficacy of aureomycin is evident in the remarks by Kneeland, Rose and Gibson.[29] In a report on ten cases treated with the antibiotic, they said, "It is obvious that in treating a disease like a typical pneumonia, which is so variable and unpredictable in its course, conclusions must be drawn with the utmost caution. Nevertheless, as case has succeeded case the impression has deepened that following the administration of aureomycin a modification in the clinical severity of the disease takes place with regularity."

Similar statements have been made by other observers and, over the months, evidence has grown steadily that aureomycin is of definite value in the therapy of primary atypical pneumonia[20,28,30] Especially indicative are the carefully controlled studies made by Meiklejohn and Shrogg.[31] On the basis of their comparisons they were able to report that prompt therapeutic response was observed in 22 patients with primary atypical pneumonia treated with aureomycin. However, definite variation in the duration was seen in a control group of 20 patients treated with penicillin. Comparison of the duration of fever in the two groups indicated that penicillin is not an effective drug and that aureomycin is "highly effective" in primary atypical pneumonia.

Of course, many diseases of bacterial origin respond favorably to the administration of aureomycin. Particularly noteworthy are the effects of this drug on brucellosis or undulant fever.[20,32] Long[14] cites five cases in which there was a dramatic clinical response to the administration of aureomycin, with the temperature falling to normal within 72 hours and with a progressive remission of all symptoms. These patients have been followed for from two to six months. All have gained weight consistently and none have shown any signs of a return of their disease.

Also indicative are the results obtained by Spink and his coworkers[15] in 24 cases of acute and chronic cases of brucellosis. From their findings it was concluded that the immediate therapeutic results from aureomycin were far superior to those obtained with any other specific therapy. This last included a combination of sulfadiazine and streptomycin. Unfortunately, streptomycin was prone to cause vestibular disturbances in the ear. More over, because streptomycin had to be administered intramuscularly, hospitalization was desirable. In contrast, aureomycin was given orally and most cases could remain ambulatory.

Pneumonia due to pneumococci has also responded to therapy with aureomycin. This is evident in the reports by Collins and his associates[6,9,33] They treated four cases of pneumococcal pneumonia with aureomycin by month. Within 18 to 36 hours after the first dose

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A.M.A. COSMETIC RULES

THE American Medical Association has announced the personnel of the Committee on Cosmetics and has also issued the "rules governing the acceptance of cosmetics by the committee." The members of the committee are: Howard T. Behrman, M. D., Assistant Clinical Professor of Dermatology, New York University; Morris Fishbein, M. D., Editor, Journal of the American Medical Association and Hygeia; Harry R. Foerster, M. D., Assistant Professor of Dermatology, University of Wisconsin, Associate Professor of Dermatology, Marquette University; Harry Huber, M. D., Chicago; A. J. Lehman, M. D., Ph. D., Chief, Division of Pharmacology, Food and Drug Administration; Herbert R. Mayes, Editor, Good Housekeeping; Herbert Rattner, M. D., Associate Professor of Dermatology, Northwestern University School of Medicine; Austin Smith, M. D., Director, Division of Therapy and Research, secretary, Council on Pharmacy and Chemistry; Louis G. Zopf, M. S., Professor of Pharmacy, Chief, Department of Drug Service, College of Pharmacy, State University of Iowa.

THE RULES OF THE COMMITTEE ARE AS FOLLOWS:

RULE I—COMPOSITION.—The qualitative and, where possible, the quantitative composition of cosmetics submitted to the Committee must be made known to the Committee. This information will be held in confidence except when it is necessary to reveal the information because of a health problem that arises. Working formulas also will be held in confidence.

RULE II—IDENTIFICATION AND CONTROL.—Suitable procedures for assuring control of the finished product must be supplied to the Committee by the distributor or manufacturer.

RULE III—THERAPEUTIC CLAIMS.—Therapeutic representations normally will not be accepted by the Committee, as such representations normally make the product a drug, which comes within the purview of the Council on Pharmacy and Chemistry. At times, however, there may be exemptions from this rule, such exemptions being determined individually for the submitted items.

RULE IV—ADVERTISING.—Advertising must conform to claims or statements that can be proved by information submitted by the distributor or manufacturer or that are based on common knowledge.

RULE V—NAMES.—Trade-mark names for cosmetics accepted by the Committee should not be misleading, suggestive of the treatment of disease or its symptoms or in any way capable of influencing the health of the purchaser by deception.

RULE VI—PATENTS AND TRADE-MARKS.—If a cosmetic is patented or trade-marked, the number of such patents and the name and number of the registered trade-marks should be submitted to the Committee.

RULE VII USELESS ARTICLES.—A preparation will not be accepted by the Committee if it obviously has no value as a cosmetic.

Outline of Presentation of Submitted Product

When a product is submitted to the Committee on Cosmetics the interested distributor or manufacturer should supply three (3) trade packages of each item, twelve (12) copies of all labels, instructions and advertising material proposed for the product, and a sample of each ingredient contained in the product.

Also accompanying this material there should be a description in *triplicate* supplying the following:

1. The name of the product, and any synonyms that may be in use.
2. A description of the control procedures that are used to assure a product of the claimed identity, quality and purity.
   - (*a*) An analysis of each batch of raw materials.
   - (*b*) An outline of a system for checking the exact amounts of the various ingredients that go into each batch.
   - (*c*) A description of the record of the lots of raw materials used in each batch.
   - (*d*) A statement on the code system for identification of each batch.
3. A definition of the article and its complete formula.
4. A description of the physical properties.
5. A statement of any pharmacologic action that might be expected from any of the ingredients and from the final product.
6. A report from qualified experts on the value of the product for those uses for which it is recommended, provided that it differs from those in common use.
7. A report of toxicologic studies, sufficiently complete to establish the safety of the product when put to its intended use.
8. The numbers of any patents and the names and numbers of any trade-marks that may have been assigned to the submitted preparations.
9. A list of the forms and sizes in which the article is made available.
10. Studies on patch tests:
    - (*a*) Two hundred to 1,000 subjects (the figure 200 is to be regarded as an absolute minimum).
    - (*b*) Method of paired comparisons is desirable, but not required.
    - (*c*) Control-old formula of similar nature or usage whenever possible.
    - (*d*) Routine 48 hour test with daily readings for three additional days.
    - (*e*) Technic: With liquids: Saturate a suitable substance, such as a piece of gauze ½ to (1 inch 1.3 to 2.5 cm.) square, four plys thick, squeeze out excess liquid and apply to normal skin of arm, leg or back, cover with nonwaterproof cellophane 2 inches 5.1 cm.) square and seal with adhesive plaster 3 inches (7.6 cm.) square.

      With powder: Place powder on gauze moistened with water or isotonic sodium chloride solution, and duplicate above.

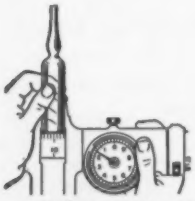
      With solids: These can be powdered, or, if soluble, they can be dissolved in definite concentrations and tested as above. When the solid is of a resinous character, the solution containing it may be painted on the skin and the solvent allowed to evaporate. The dry film of resin can be covered with cellophane and adhesive plaster as indicated.
    - (*f*) Retest in fourteen to twenty-one days following same routine at original sites.
11. Report on usage studies:
    - (*a*) In a controlled group, preferably on the same subjects used in routine patch test studies.
    - (*b*) Duplicate conditions of actual usage and on actual sites of expected usage for a period of from two to twelve weeks.
    - (*c*) It may be advisable to have a control experiment with old cosmetics of similar purpose and/or formula, when claims of superiority are offered or when irritation is a possible factor. Use either on alternate series of subjects or on same subjects dividing body surface (new cosmetics on one side, old cosmetics on other). If no dermatitis occurs in 200 subjects, product is probably safe, if in more than 1, product unsafe. If only 1 case, retest a new series, if 1 or more cases in new series, product is unsafe.
    - (*d*) It may be advisable to have a trial sale, to be carried out where control or supervision can be maintained. Over a six month period, at least one thousand units

(*Continued on page 105*)

Three symbols of superiority

Coby ampoules are "vacuum-free before snipping." Glass dust that results from snipping operation is *not* sucked within the ampoule. It is, rather, readily drawn up and carried away by giant dust collectors attached to each cutting bench.

Coby ampoules stand up straight without support. Ampoule necks are more concentric with filling needles, and machine-filling is more rapid, and accompanied by less breakage.



Coby ampoules are carefully calipered to ensure greater uniformity of inner volume. When subsequently filled and sealed, Coby ampoules aid materially in finishing the package that "sells on sight".

Coby engineers are constantly developing improvements that continue to make the Coby ampoule a better ampoule. Descriptive circular and price list of regularly stocked ampoules available on request.

Write Dept. C

THE COBY GLASS PRODUCTS CO.
ATTLEBORO, MASSACHUSETTS - U. S. A.

PACKAGING AND SELLING

ADVERTISING ON TRIAL, TOO

ADVERTISING is not escaping the probing and the critical, realistic examination that business men are directing toward business practices in general. A group of American perfumers are now engaged in cooperative research to discover whether their advertising copy has been producing expected results and even whether this copy has gone so far afield in sales appeal that it may actually have injured sales.

There is a very strong and growing suspicion that many traditional procedures in advertising have grown into a habit which may actually be in some respects a bad habit. The comfort which individuals have taken in this habit from the mere fact that everyone else was committed to doing the same thing is beginning to disappear as specific, traceable results become necessary.

At the 29th Annual Convention of the Controllers' Congress of the National Retail Dry Goods Association, John Giesen, Director of the Retail Division of the Bureau of Advertising, American Newspaper Publishers Association, declared the waste in retail advertising centers about the offering of "wrong items, at wrong price lines, at wrong times, and with a lack of real selling information in the copy."

Mr. Giesen cited a recent conversation with Russell W. Brown, Vice President of Allied Stores Corp., in which, he reported, Mr. Brown said "that virtually half of the company's newspaper advertising investment is wasted by errors in timeliness and offering of the wrong merchandise."

In this particular case if Mr. Brown is referring to newspaper "cooperative" advertising which comprises quite a considerable part of department store newspaper advertising, he can get added confirmation of the appalling waste of this very effective form of advertising by inquiring at the office of the Association of National Advertisers. He can also get a very vivid explanation for the reasons for a large part of this extravagant waste.

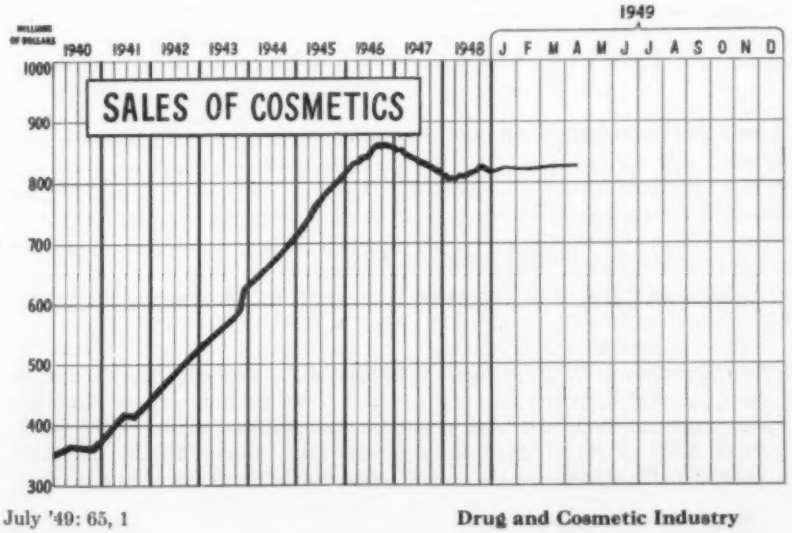
There are probably quite a few things that national advertising will have to justify during this reformed period when business men are suddenly determined to get a dollar's worth for a dollar's expenditure. Practically only a small fraction of advertising copy is predicated upon any intelligent market research as to why the public really wants any specific product, and in the selection of media probably only a minor part of the space is based upon a definite knowledge gained in market research as to who the customers are and where they actually live. Advertising has been a creature of traditionalism and herd instinct, in preparation of the advertising copy, in the style of the layout, in the selection of media and in all its forms. Almost any veteran space salesman will admit, in those occasional lucid moments of complete candor which affect most salesmen, that their most potent argument has always been the representation of competitors in their particular magazine.

One of the greatest obstacles that advertising faces in breaking away from the system of traditionalism is that in the preparation of almost all advertising and in the planning of most advertising campaigns and in the selection of media, the remuneration of the people who do this work has been based upon the total amount of the money they spend and not on the amount of work which they do. No matter how idealistic any one is in advertising, nor how determined they are to delve into the most effective ways of producing sales from advertising, this question of overhead, competitive pressure and good old human nature persists in driving them back in to the formulas which has become the tradition.

It is possible that we are now in the process of a very drastic revolution in distribution and in retailing. These changes will have great effect on advertising procedure.

It will be interesting to observe whether under the present inelastic and econo mically wrong basis of remuneration, that is, on the basis of money spent and not on work done, our present system of advertising procedure can persist without drastic change.

Retail sales of cosmetics for the twelve months ended with April 1949 amounted to $827-932,000. This compares with $825,110,000 for the twelve months ended with March 1949 and with $806,724,000 for the twelve months ended with April 1948.



Super-Combination Retailing

The decision of a leading drug chain on the Pacific Coast to lease space in a leading super-market store gives an

opportunity for many interesting conjectures. We do not know yet just what to call this combination, because the incorporation of a complete retail store within the super-market could hardly be called a leased department as we normally understand that term in retailing.

Actually, as we understand the arrangement, it is a complete retail store of one kind within a complete retail store of another kind.

The grocery super-market is certainly the store of the hour in this post-war era. It has been expanding with accelerated speed, and there is no doubt that its particular formula has won warm public acceptance.

Part of this precipitate growth has come from an invasion of other retail fields not normally associated with grocery stores. One of these fields has been cosmetics and toiletries, and this has been growing so rapidly that recent figures indicate that well over 30 per cent of the grocery super-markets now have a toilet goods department or counter.

This new development of a drug chain leasing super-market space must mean a conflict on certain basic products between the two operations, and it will be very interesting to watch just how this particular problem is solved. To take one specific product which is normally quiet profitable because of its very high turnover rate, that is cigarettes, will these products be abandoned by the drug chain in this particular arrangement. If the drug store abandons cigarettes, will it also abandon any other group of products, such as toiletries or candy, which super-markets in general find that they can very profitably market for themselves.

If the drug store retains such things as cigarettes with the idea of competing with the grocery super-market in the same store, how can it adjust its costs, with clerk and service overhead, to meet the super-market plan of selling where the clerk is eliminated or very largely minimized and where superior display is available.

If we find that this California wedding is the beginning of a new development in retailing, it would seem fair to conclude that the retail drug trade is heading for a very rigorous education in the two basic principles of super-market retailing.

The first lesson, that of the centralized super-market, has already been taken to heart by several of the drug chains, and as the progress of the last few years for Owl and Liggett shows, the trend is specifically toward the limited number of centralized super-market stores in the drug chain field rather than a much larger number of conveniently located, limited stocked stores.

The other lesson, which has not yet been applied, except to a very limited and incidental degree in the retail drug field, is the super-market method of display at "customer-help-yourself" counters. There has been some preliminary discussion of this subject and in fact a New York City department store, among a few other retailers, has already tried out the principle of segregating branded, utility toiletries that could be called convenience items, where little or no skill at selling is required, from the higher priced products classified as shopping items where the customer desires sales assistance. In these few trials, the low and medium priced utilities have been displayed in the segregated department where the customer could help himself just as they do in a super-market, leaving the balance of the products where selling is required and where it can produce a profit, in the main department.

Very many retail drug stores have applied this principle to a partial extent in center tables and in nest tables adjacent to display cases. But so far as we know, there has never been a systematic study of such things as cosmetics and toiletries, household remedies, etc. for this kind of selling.

From the viewpoint of segregation, the standard, advertised, convenience products may do just as well or even better with full adequate display and immediate customer accessibility, rather than waiting for the intervention of the sales clerk. Those other products, which require selling, which contribute toward building up a store clientele and which can afford to pay sales clerk overhead may then have conventional treatment.

How to Get Display in a Super Market

One of the oldest forms of sales strategy has been to use the class or prestige retailer, and selected distribution, to build a nice, elegant reputation and then to give these fellows the bird by slipping over to mass distribution with little or no expense.

This operation takes careful planning and smart timing. If it is handled properly, the haughty stores never wake up to what has happened until the product is in the chains, the variety stores and all the wholesalers.

Properly handled and with a suitable product, selected distribution in top stores with great prestige among other retailers is relatively inexpensive in direct selling cost and in advertising. This cost is a small fraction of the money needed to smash directly into nation-wide mass distribution.

It takes time to acquire a well grounded reputation in prestige stores. This process can not be forced too abruptly. The principal mistake of armchair strategists in this operation is to be too greedy and in too much of a hurry. Since the sole objective is to secure mass distribution, under favorable bargaining conditions and at the lowest cost, it is essential to have a keen sense of timing. Class distribution should not be dropped or tampered with in the least degree until it is ascertained with certainty that the mass distributors are very hungry or at least ready to snatch the bait.

The period of class distribution will take a minimum of one year for a product unusually endowed with some quality of specific interest. Otherwise two to three years are essential. For this purpose retail reputation is more important than consumer recognition, although there must of course be a developing quantity of this. But the purpose of this strategy is mass distribution at least cost and for that reason the primary motivation in every act is to arouse general retail interest, hunger and envy.

If successful, this sales strategy will bring leading mass distributors knocking at a manufacturer's door. In the beginning they should be repulsed with friendly and pious words. Not until a sufficient number have appeared, some with certified checks for very heavy initial orders, all with extravagant promises of display and store favor, should the astute salesmanager decide that the time has arrived for the broad jump.

It would not at all be farfetched to say that in the past some companies have achieved national mass distribution with a rumor and a few telephone calls. It is even truer to say that in this and other trades there are now companies which have been valiantly resisting great pressure from mass distributors to make this change.

At any rate, we can say definitely that on the basis of past sales expenses and case history records that this method outlined above is the lowest cost road to mass distribution. Even more than this, it introduces the prod-

uct to the mass store, not as a newcomer crowding in and yet to be proved, but as a visiting dignitary for whom even the best is hardly enough.

This industry has a product which has attained quite a bit of retail and public interest in the last two years. This interest is based, not on the fact that it will alleviate body odors, which is not new, but because this action is incorporated in a somewhat new and very convenient form for daily use. These folks have spent quite a little money in successful advertising, they have acquired some reputation and prestige for their product in department stores and an ethical standing, resulting in public confidence through wide distribution in drug stores.

Now we hear that this product will appear everywhere in the super markets and grocery stores and rumor says that the company from now on are quite content to drop the retail druggist and the department store because they are going all out for grocery stores.

No one can criticize this strategy unless they want also to indict quite a number of respected mass distributed brands. The class retailers who to so large an extent bestow reputations on manufacturers ought to be well able to take care of themselves because they have been through this same thing so often before.

One place where criticism or at least healthy curiosity is in order is this: we expect that the major grocery distributors fell right in the laps of these people, with little or no expense. But the product was on the market an awfully short time. Did they hold out long enough to get what they could have in display?

Dr. Salesmanager

In presenting five million dollars to the Harvard School of Business Administration. John D. Rockefeller, Jr., remarked in a letter that it is his profound conviction that the continuation of enterprise based on individual initiative is essential if the American form of Government inherited from our forefathers is to be maintained and the nation's economic strength preserved. He adds that he is convinced, as a result of a study, that the Harvard Business School is making a most significant and objective contribution to the strengthening and perpetuation of this type of individual enterprise, in that it is helping to raise the technical standards and to broaden the sense of social responsibility of the leaders of business.

In acknowledging this gift, Dr. Conant, Harvard's President, states that the goals towards which the Harvard Business School is striving have been defined by Dean David in terms of "the ideal business man." Such a business man is not a common type yet, Dean David explained, "but he is beginning to emerge."

According to Dean David, this ideal business man "would (1) have the ability to work effectively with people; (2) have the ability to make decisions; (3) instinctively accept responsibility; (4) understand the basic forces at work in our society and recognize the weaknesses and deficiencies in our system; and (5) have a clear understanding of his objectives, lying mainly in the area of furnishing both material and other human satisfactions."

It is only within recent years that business has been giving full recognition to the business schools in various universities. These schools have already contributed substantially and in various ways to research in business operations. Probably one of the long-range and most beneficial accomplishments of the business school will be to increase substantially the status of the business man in public respect. While we do not seem to give the same reverence to the professional man and the scientist in this country as they do in Europe, we still, to a certain extent, set the scientist aside as a man who has been granted more of certain qualifications in character, and in intelligence than the ordinary man, particularly the business man. One of the best proofs of this has been the general public attitude during the last 18 years toward the average professor and the scientist who has been called to Washington to decide our national destiny, as compares with the business man.

It would seem that if we take any human being and put him through college in such a course as anthropology, biology or particularly such obscure courses as economics and psychology, and then if we give him enough time to acquire a doctor's degree in this subject, he is immediately endowed with a aura of esteem that is rarely granted to the man who may build or continue in success a many million dollar corporation producing, at continually decreasing prices, a commodity which makes more pleasant our present civilization and which continues to give employment to many thousands of people.

There is no reason why we should not arrive at a general public recognition that the various duties in business are as much of a science as economics or psychology or even as much of a science as the modern conception of anthropology. It would mean for instance that a salesmanager would be a recognized scientist and that the day will come when we will be calling him Dr Salesmanager.

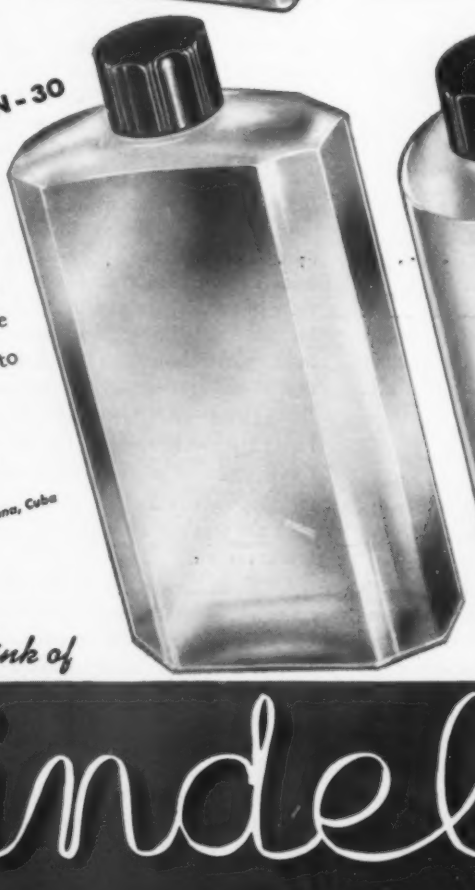
The head of an enterprise would not dare to rush into the laboratory and say to the scientific director, "I don't think you are using the right kind of apparatus for this so-and-so microbe and the color of the stain that you are using is outmoded and was discontinued by any one who knows anything about fashion two years ago." Yet this same head will rush into the salesmanager and say "Our business is falling off. We have just cut our advertising appropriation 25 percent and we have got to do something about sales. Get right on the job and double our distribution in the next six months." To Dr. Salesmanager, distribution will be very far from the haphazard and incomprehending muddle of such a remark. To him distribution will be a quantitative and qualitative fact depending on a careful appraisal of such factors as the price and quality of the product, who buys it and where do they live, the age and reputation of the company, the age of the product and the degree to which it has acquired any retail and consumer recognition, the size of the advertising appropriation, and the size and quality of the sales force, the proven ability of the sales force to acquire retail cooperation such as display and friendly informed selling, and many other factors. Distribution will then become as definite an exact quantity and quality as anything that would be arrived at in any of the sciences.

It has been common to excuse the ignorance and mental laziness of many salesmanagers and many company heads in scientifically studying their distribution and their sales problems by saying that selling is entirely human relations and by tacitly accepting what they believe to be a fact, that is, if any one has a certain peculiar chemical combination which makes him the extreme extrovert and the happy mixer, then they need none of this truck and are far better off without it.

In actual fact, human relations as a subject in itself is rapidly working to-

Stock Bottles

that give your package INDIVIDUALIZED DISTINCTION -available in all popular sizes



Add glamor and distinction to your package, without the costly investment of special design, by selecting one of the many artistic Swindell stock bottles . . . The four bottles illustrated are representative of a wide variety available for your choice . . . in sizes ranging from ⅛ ounce to 16 ounces.

SWINDELL BROTHERS
BALTIMORE, MD.
200 Fifth Ave., New York - Roberto Ortiz, Havana, Cuba

When you think of bottles, think of

Swindell

wards being one of our recognized sciences. One of the basic things we are discovering in human relations is that even a man endowed with unusual human qualities in some direction, let us say in selling or in machine designing, can and very often does fritter away his opportunities, and like the steam engine, operates at less than 18 percent of his potential power.

When the business man in such capacities as the salesmanager and in general management reaches the status of a scientist and seriously operates in his job with the attitude of a scientist and with the proven tools developed for his science, then we can legitimately call him Dr. Salesmanager or Dr. President. Then probably the objective sought by Mr. Rockefeller and Dr. Conant and Dean David will come very near to fulfillment.

Fragrance Foundation

The Fragrance Foundation got off to a thriving start at a luncheon on June 23 at the Waldorf Astoria. Fragrance Foundation, Inc., which will consist of members of the Toilet Goods Association, replaces the former "Committee on the Use and Marketing of Perfume Products."

After a brief introductory speech by Jack Wiedhopf of Ciro Perfumes, who inspired and nourished the growth of the entire idea, Miriam Gibson French, coordinator of the Foundation, outlined a publicity and educational campaign which is certainly the most intelligently conceived and the most comprehensive educational program that has ever been in operation in any branch of the perfume or cosmetic business.

In two of the talks, subjects were touched upon which indicate that the program of the Fragrance Foundation may well have effects upon the entire industry a great deal more far reaching than most people have anticipated.

In a very liberal, generous and intelligent talk, Dick Salomon, the president of Charles of the Ritz, stated that while his company is basically interested in facial treatments and that fragrances are only a minor part of their business, his company would become a member and would participate wholeheartedly. It is true, as Mr. Salomon stated, that the educational work to persuade women to use several creams as a treatment program has been far in advance of any similar well thought-out, program of education that the perfume people have evolved to sell their product more consistently and in greater quantity. This is also true of make-up products where the use of fashion and color and the educational work in this direction has substantially increased the per capita use of lipstick, nail enamel, rouge and other similar make-up products. Yet in support of this excellent educational work of the treatment houses in creams and make-up products, no one can say that these companies have anywhere nearly reached their full objective, which could well be the complete education of the 40,000,000 women who are using lipsticks, in the daily care of their skin and in the proper use of cosmetic items. These people have done an excellent job, but they still have a very long way to go. It may have been in Mr. Salomon's mind, and it will undoubtedly occur to many other people in the industry, that this intelligent, comprehensive program of the Fragrance Foundation, while it must be directed toward an educational program to bring about a greater use of fragrances, will still have a deep and beneficial effect upon every single cosmetic product both with the folks in retail stores and with the consuming public.

Another point touched upon both by Paul Russell, vice president of Lucien Lelong, Inc., and by Bob Fiske, perfume and cosmetic buyer at Saks Fifth Avenue, is the reaction of retailers toward this program. Fiske stated, in speaking as a retailer, he knew that the retail trade would be very deeply interested in this program, would cooperate and would take a great deal of personal interest in the participating members of this Foundation.

Mr. Russell, taking a slightly different angle, stated that he was sure that the work of the Foundation would interest and enthuse many of the retailers outside of the ranks of the large, nationally known stores, and would have a very beneficial effect upon many small stores in small cities. This point, which was not explored in detail and which will evolve as the work of the Foundation progresses, strikes us as being one of the really fundamental values that will result from the program of the Foundation.

The sale of perfumes and cosmetics to the American public depends fully as much upon an alert, cooperative, enthusiastic and informed retail selling force as it does upon anything that can be effected through consumer advertising or publicity to the consumer.

If the work of this Foundation brings about, as we believe it will, a strong organization of retailers where, from ownership and general management down through the ranks to the girl behind the counter, there is enthusiasm for developing a fine, adequate perfume department and where there is sincerity and enthusiasm for informed knowledge in behind-the-counter selling, then we are certain that this new, beneficial retail attitude which will be so helpful to the fragrance makers will also, without any question, extend its beneficial influence to every other single cosmetic product.

Fragrances are so intimately a part of the entire cosmetic business that we certainly must concede that anything which benefits fragrances must also benefit the entire industry.

Department of Commerce Monthly Retail Trade Report

Retail sales of all kinds in drug and department stores showing sales for the month of April 1949 as compared with the same period in 1948.

	Department Stores	*Drug Stores*		*Department Stores*	*Drug Stores*
Atlanta	+8	+2	Minneapolis	+4	+6
Baltimore	+7	0	Milwaukee	-1	+5
Birmingham	+8	+3	Newark	0	-6
Boston	+15	+5	New York	-2	+1
Chicago	+1	+3	Philadelphia	+12	-2
Cincinnati	+6	+5	Pittsburgh	+14	+2
Cleveland	+7	0	Providence	+13	0
Dallas	X	0	St. Louis	-1	+2
Detroit	+8	+8	San Francisco	+13	-3
Los Angeles	-2	-5	Seattle	+4	+1

Black is Different, Anyway

Black is an unusual packaging color to select for such a product as candy. However, The National Licorice Co. are using a black box as a way of giving contrast to their product which is gayly sugar coated in six pastel colors, and because the basic product is licorice.

The Robert Gair Company of New York have designed a striking family of three new folding cartons for new members of the line.

New Products and New Packages

ABBOTT LABORATORIES claims its new product Thenylene Hydrochloride Cream, may be used temporarily while diagnosis is being established in such conditions as contact dermatitis. Clinical trial has shown that an antihistaminic effect is produced when cream is applied topically.

AMERICAN FERMENT COMPANY is offering its Caroid and Bile salts with Phenolphthalein and Al-Caroid Antacid tablets in bottles of 20. Before this, both items were available only in 50's and 100's.

BRISTOL-MYERS COMPANY has introduced its new dentifrice, Ingram Ammonium Ion tooth powder. The powder is smartly packaged in a green and white tin, to retail at 53 cents. It contains dibasic ammonium phosphate and urea as active ingredients, and has a pleasant minty flavor.

C&C LABORATORY, Dallas, offers a boon to farmers and other outdoor workers with a new formula for the relief of chigger. The new product is Chigarid, and the liquid, applied directly to chigger bites by means of a glass applicator, stops itching and inflammation at once. Applicator bottles are made by OWENS-ILLINOIS GLASS COMPANY.

CENTAUR-CALDWELL DIV., STERLING DRUG COMPANY., has come out with a new container for its Z.B.T. Baby Powder. The old dark blue and white can has been modernized, with a baby blue and pink with baby pictures introduced into the overall design.

FLINT, EATON & COMPANY, has capsuled Choline Dihydrogen Citrate. This convenient dosage form is in addition to the syrup. The capsules are prescribed for the treatment of hepatic diseases associated with fatty infiltration, degeneration and early cirrhosis, vitamin and protein deficiencies.

IODENT COMPANY has announced incorporation of ammonium compounds into a tooth paste. The company stresses the importance of its discovery by pointing out that seven out of ten dentifrice users prefer a paste to powder. The new Iodent tooth paste, provides a safe, pleasant, cleansing action.

LEDERLE LABORATORIES' latest addition to its Aureomycin products is Aureomycin ointment, for external use, The new 3 per cent ointment contains 30mg of aureomycin per gram, blended in a petrolatum and wool fat base. It is applied directly to the skin. The one ounce tube is packed in a blank prescription-use box with a labeled outer sleeve which may be removed by the dispensing pharmacist.

MATTHEW PRODUCTS INC. has introduced a suntan spray in a flexible, squeezable plastic bottle. The lotion is greaseless, dries quickly and is perspiration resistant, with an added advantage that it is applied by a spray.

MRT LABORATORIES introduces Thalinol-MRT a modified gelatin capsule preparation containing Phenolphthalein U.S.P. Thalinol-MRT is indicated in the treatment of functional or atonic constipation. One capsule when needed for the relief of constipation is the dose, when prescribed by a physician.

MITCHUM DIV., GOLDEN PEACOCK INC., has a new cream called Esoterica, whose primary purpose is to fade brown spots and other surface blemishes caused by weather and neglect of the complexion.

JOHN HUDSON MOORE is offering a hot weather special, with a combination package containing a choice of either Sportsman After Shaving Lotion or Cologne, plus Sportman Liquid Deodorant, the two dollar combination to retail for one dollar. The liquid deodorant has been repackaged in a functional two ounce bottle.

ORGANON INC. has just introduced a new muscle relaxant, Oranixon. This compound relaxes muscular tension and relieves spasm of voluntary muscle. It also has some analgesic properties. Chemically, the drug is 3-ortho-toloxy-1, 2-propanedol. Oranixon is available in two dosage forms, compressed tablets and an elixir.

SCHIEFFELIN & COMPANY is presenting Testosterone Propionate "Schieffelin" as the first product of its expanded line of parenteral medications. It is indicated in male patients for the treatment of cryptorchidism, eunuchoidism. In female patients benefits have been reported in functional bleeding and supression of lactation. It is supplied in one ounce ampuls-boxes of 12 and 100, and in 10 cc. multiple dose vials.

WHITTIER LABORATORIES has come out with a new antihistaminic drug providing long-acting relief from allergic symptoms called Chlorothen, proven by clinical trial to be effective in the majority of allergic disorders, and in particular, seasonal hay fever. The company has issued Chlorothen, as uncoated tablets of 25mg. each. It is available in bottles of 100 tablets.

TUSSY announces the creation of a cologne wardrobe for July. Midnight, Flower Mart and Naturelle are designed to meet the around-the-clock demands of the feminine mood.

WINTHROP-STEARNS INC. has resumed manufacture and marketing of Neocurtasal for substitution in an indicated salt-free diet for cardiac diseases, particularly when associated with edema, hypertension, arteriosclerosis and certain complications of pregnancy.

WINTHROP-STEARNS INC. has also introduced pHisoderm Hexachlorophene 3 P.C., a new soapless antiseptic sudsing detergent providing surgical teams with a two-minute preoperative scrub. It is active in hard water, contains no alkali, and does not form insoluble soap films which may harbor germs.

WOODBURY has a new make-up called Dream Stuff which is a "tinted foundation and powder in one." Complete with puff and packaged in blue and gold, Dream tuff resembles a cream make-up but is not greasy. Available in four shades it retails for 49 cents.

WYETH INCORPORATED has added several new products to its list of specialties. Dapta, a multivitamin preparation for infants, Test-osterone, Membrettes and Implantation Pellets, and Progesterone are the preparations offered to the market.

Enthusiastic Consumer Acceptance is yours when your product is packaged for the particular therapy indicated. Above adaptations of our New Unit-Dose Package illustrate—

AMPHOJEL — to be taken 1 at a time, so the standard-sale package of 60 is subdivided into single units for easy selection.

PLENAMINS — a combination dosage not desirably combined in one capsule, yet indicated for simultaneous dosage. Both capsules — one amber and one dark — are combined in a carrying package of 2. The standard-sale package of 72 capsules, is clean and convenient for the whole family.

CEPACOL — a highly professional throat lozenge, the use of which calls for 4 daily. Therefore a carrying package of 4 (affording perfect protection for a sugar-based product) and a standard-sale package of 24.

The New Unit-Dose Package encourages increased use — and increased sales. If your product is capsule, tablet, cream or powder this revolutionary new method of package offers unusual advantages.

The New Unit-Dose Package by

*Sanitape-Sealtite

IVERS • LEE COMPANY • 215 CENTRAL AVENUE • NEWARK, N. J.

* Sanitape-Sealtite is a unique method of packaging pills, tablets, capsules, creams and powders, by which each unit or unit dose is sealed in its own air-tight compartment—assuring convenience, protection and maintained efficacy. Packages, methods and machinery fully covered by United States and Foreign Patents, and Patents Pending.

Accepted, Effective and Economical...

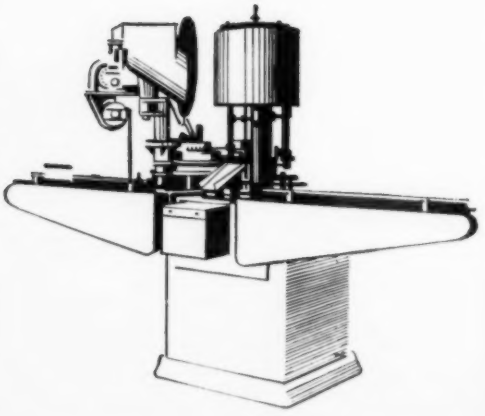
THE ANCHOR* C.T. CAP

OVER the years the most popular, the most universally used closure for products not subject to bacterial decomposition but requiring an airtight seal has been the C. T. style cap.

The *Anchor* C. T. Cap effects a uniformly tight and dependable airtight and leak-proof seal. It's even better today than in the past, for now it has a scientifically designed deep rolled thread which improves holding qualities on min. glass; permits ample clearance over glass thread, prevents binding and results in fast, low-cost application and easy removal.

Now—try *Anchor* C. T. Caps. Samples on request.

*Reg. U. S. Pat. Off.



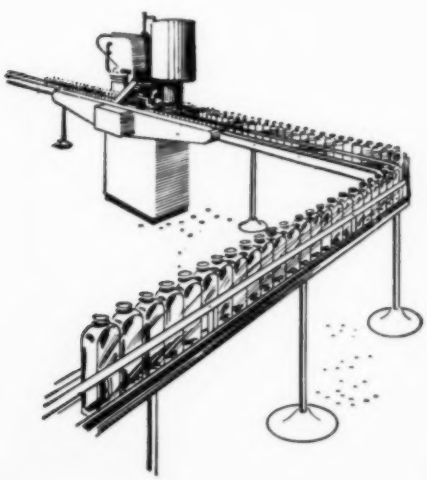
ANCHOR HOCKING
GLASS CORPORATION
Lancaster, Ohio

FOR UNINTERRUPTED MOVEMENT ON CONVEYORS use Anchorglass* Containers

AVOID trouble on your conveyors. Pack in *Anchorglass* Containers. Once conveyor guides are set, *Anchorglass* Containers move smoothly from station to station. They are designed and manufactured to assure uninterrupted passage along conveyors. Uniform in all dimensions, smooth sides prevent twisting and jamming—flat bottoms prevent tipping. And they're tough and strong because glass is evenly distributed. Proper annealing and constant tests and inspections keep them right.

Regardless of the style package your products require, there's an *Anchorglass* Container, in crystal, amber or emerald green glass that will give you top performance all along your production line. Write us for samples.

*Reg. U. S. Pat. Off.



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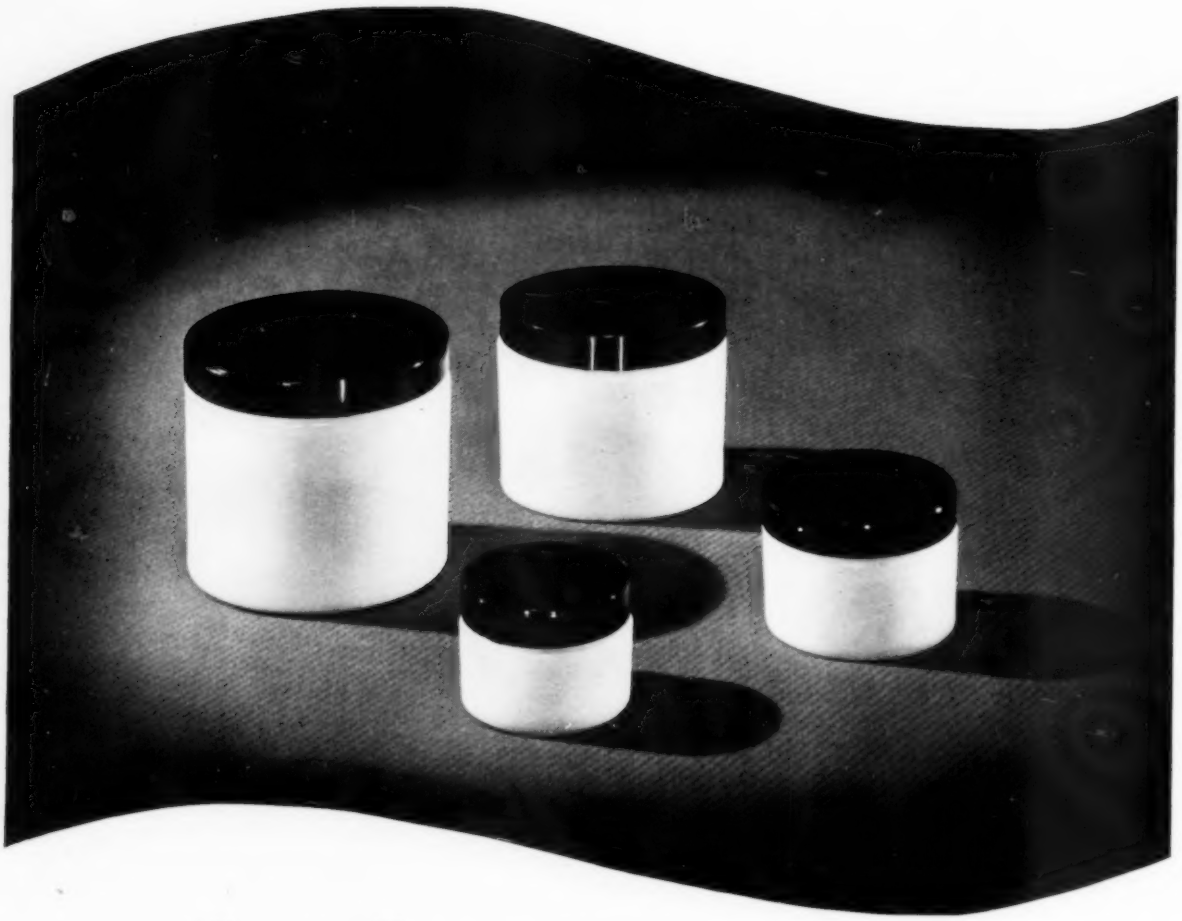


Carr-Lowrey Opal Jars

are a pleasing combination of beauty and utility. They have the appearance that makes them welcome in the finest store or on the finest vanity. They are durable, sanitary containers for a wide variety of cosmetic preparations as well as medicinal ointments and salve.

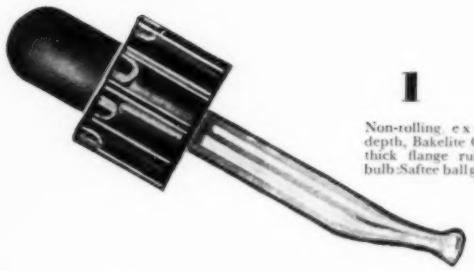
You can get prompt delivery on these jars in almost any size from ½ oz. to 16 ozs.

CARR-LOWREY GLASS CO.

Factory and Main Office: BALTIMORE 3, MD. • *New York Office:* 40 W. FORTIETH ST. • *Chicago Office:* 1502 MERCHANDISE MART

NEW PERFECTION DROPPING PARTS

QUALITY UNIFORMITY CLEANLINESS SERVICE



1

Non-rolling extra-depth, Bakelite Cap; thick flange rubber bulb; Saftee ball glass.

3

Regular plastic cap; thin flange rubber bulb; semi-blunt glass.

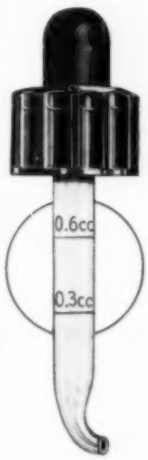
4

Single shell metal cap; oil-resisting Amekine synthetic rubber bulb (without strong odor); blunt glass.

By the Originators and World's Largest Manufacturers of Screw-Cap Dropping Parts

Since 1931, when the screw-cap dropping outfit was originated by Pennsylvania Glass Products, the world-wide acceptance of New Perfection has been increasing. The fact that the New Perfection dropping outfit is the most practical and sanitary dispensing unit for liquid preparations accounts for much of its popularity. But, the steady growth of our operations is due rather to the efficiency with which our products are manufactured and distributed.

Our exacting standards for quality, uniformity and cleanliness guarantee that each shipment will meet your most rigid specifications. Our policy is to produce and sell *the best* in dropping outfit—and thus merit your continued patronage as we have in the past.



2

Non-rolling, extra-depth, Bakelite cap; thick flange rubber bulb; special bent glass (CALIBRATED in color).

New Modernistic bottle. Designed to lie flat for convenient labeling. Oval front provides ample label space.

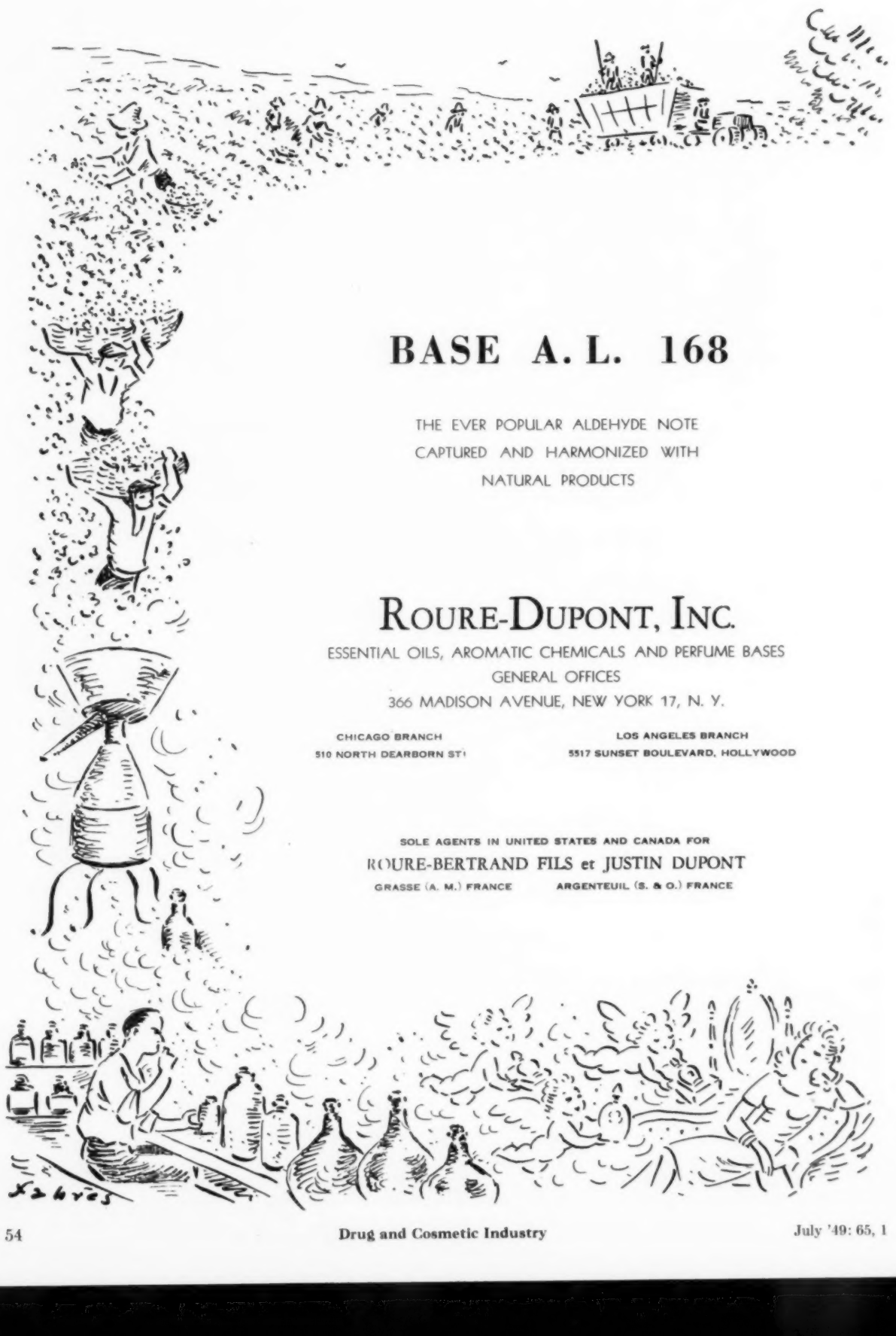
New Perfection dropping parts, either plain or CALIBRATED IN COLOR, can be supplied to fit your bottle or with our new Modernistic style bottles. Our bottles are available in Amber, Blue, Green or Clear glass in 2 cc, ⅛, ¼, ½, 1 and 2 oz. capacities. Special oil-resisting AMEKINE synthetic rubber bulbs can be supplied for use with oil products, or natural rubber for general usage.

Write for Samples and Quotations

PENNSYLVANIA GLASS PRODUCTS CO. INC.

"Glass Goods of the Better Kind"

428-432 NORTH CRAIG ST. • PITTSBURGH (13), PA., U.S.A.



BASE A. L. 168

THE EVER POPULAR ALDEHYDE NOTE
CAPTURED AND HARMONIZED WITH
NATURAL PRODUCTS

ROURE-DUPONT, INC.

ESSENTIAL OILS, AROMATIC CHEMICALS AND PERFUME BASES
GENERAL OFFICES
366 MADISON AVENUE, NEW YORK 17, N. Y.

CHICAGO BRANCH
510 NORTH DEARBORN ST.

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5517 SUNSET BOULEVARD, HOLLYWOOD

SOLE AGENTS IN UNITED STATES AND CANADA FOR
ROURE-BERTRAND FILS et JUSTIN DUPONT
GRASSE (A. M.) FRANCE — ARGENTEUIL (S. & O.) FRANCE

NEWS...

Klumpp Again Heads APMA

Dr. Theodore G. Klumpp, president of Winthrop-Stearns, was reelected president of the American Pharmaceutical Manufacturers Association at the annual meeting held at Hot Springs, Va., last month. Other officers elected are: Eastern vice-president, Ronald Helps, Schieffelin & Co.; Central vice-president, M. F. Charley, Standard Pharmacal Co., (reelected); Western vice-president, Philip K. Bates, Rexall Drug Co.; secretary, Dr. J. O'Neill Closs, the Tilden Company (reelected). New directors elected are: F. O. Burns, First Texas Chemical Manufacturing Co.; S. B. Penick Jr., S. B. Penick & Co.; Howard B. Fonda, Burroughs Wellcome & Co.; Vincent A. Burgher, Ciba Pharmaceutical Products; Harlow B. Boyle, Boyle & Co.; J. K. Flint, Flint, Eaton & Co.

Beardsley Heads Prop. Assn.

Walter Beardsley, president of Miles Laboratories, was reelected president of the Proprietary Association at its recent annual meeting at White Sulphur Springs, W. Va. Other officers elected are: First vice-president, Lupton Patten, president, Chattanooga Medicine Co.; second vice-president, E. T. T. Williams, president, the Lambert Company; third vice-president, S. M. Rising, J. H. Guild Co.; secretary-treasurer, A. K. Barta. Changes in the executive committee are: James B. Braun, Murine Company, James H. Grove, Grove Laboratories, and H. H. Hoyt, Carter Products, elected for three-year terms. Lunsford Richardson, Vick Chemical Co., elected to serve the remaining one year of the term of William Y. Preyer, Vick Chemical Co., who resigned.

Packaged Promotion

Packaged Publicity and Promotion is a new company designed to serve manufacturers and distributors who need an individual publicity or promotion job.

The company is located at 475 Fifth Avenue, New York.

Members of the company include E. E. Bass, director of promotion and publicity for Jean Vivaudou; Elaine Coren, formerly publicist for Aziza.

Elected VP of Bristol Labs.

Dr. Philip I. Bowman has been elected vice president of Bristol Laboratories Inc., it has been announced by Frederic N. Schwartz, president.

DR. P. I. BOWMAN

James D. McNitt was made vice president in charge of manufacturing and Morris S. Weeden appointed assistant treasurer. Dr. Bowman has been with the company since 1944.

B. F. Ascher Heads New Drug Firm

B. F. Ascher has announced the formation of B. F. Ascher & Company, Inc., with headquarters at 903 East Tenth Street, Kansas City, Mo. The corporation will engage in the manufacture and distribution of ethical pharmaceuticals.

Mr. Ascher was formerly associated with George A. Breon & Company as Vice President and Director of Sales. In his twenty-one years with this organization he became a well-known figure in the pharmaceutical industry.

"Bo," as he is popularly known, held the office of President of the American Pharmaceutical Manufacturers Association in the years 1940-41. During World War II he served with the Corps of Engineers in the South Pacific; he now holds the rank of Colonel in the Reserve Officers Corps., Corps of Engineers.

Officers of the corporation are: B. F. Ascher, President and Treasurer; M. N. Ascher, Vice President and Secretary; R. W. Crimm, Assistant Secretary.

Distillation Prod. Names Sales Chiefs

Distillation Products, Inc., has announced two promotions within its sales force. Alvin H. Hartman, has been named sales manager of the Vacuum Equipment division and Carl W. Herrmann, was named Eastern area sales representative of the same division. Both appointments was announced by Dr. John C. Hecker, works manager.

Mr. Hartman will coordinate the sales activities of the Rochester New York and Chicago Offices, and will be located at the company's headquarters at 755 Ridge Rd. West, Rochester. Mr. Herrmann, in charge of sales in the Eastern territory, will be located at 570 Lexington Ave., New York.

Mr. Hartman joined Distillation Products in 1947 as a technical representative in the vacuum equipment field, and then was made New York sales representative. Previously he had been connected with the University of Rochester cyclotron project. He served with the Navy during the war.

Mr. Herrmann joined the company in 1942, and has been a technical laboratory assistant, service engineer, chief inspector, sales engineer, and coordinator of vacuum equipment sales. He is a graduate of Rochester Institute of Technology.

Mary Dunhill Returns to England

After her first visit to this country since the war, Mary Dunhill, founder of the firm bearing her name, has returned to England.

Accompanied by her husband, Dr. F. Geoffrey Holman, Miss Dunhill, during her stay in the United States, laid the groundwork for the full restoration of the Mary Dunhill business in England, which has been severely hampered since the beginning of the war by the stringent British austerity regulations.

Miss Dunhill is the daughter of Alfred Dunhill, founder of the Alfred Dunhill organization.

Lever Brothers Promotions

James A. Barnett, vice president and general manager of Lever Brothers Company, Pepsodent division, has been named vice president in charge of advertising for Lever Brothers.

William H. Burkhart, has been promoted from director of manufacture to vice president in charge of manufacturing and traffic.

Dr. Theodore H. Rider, formerly associate director of research has been named director of research, and John W. Bodman, who has been director of research, has been named to the newly created position of chief development consultant.

The Fragrance Foundation

The Fragrance Foundation, newly formed organization for the education of women throughout the country on the use of fragrance products, held a luncheon-meeting on Thursday, June 23, at the Waldorf-Astoria, New York.

Members of The Toilet Goods Association were invited to hear the complete outline of how The Fragrance Foundation will operate in linking together the consumer, the retailer, the press and the manufacturer in a comprehensive, educational campaign on all products where fragrance is the compelling force for purchase or use.

The meeting was conducted by J. S. Wiedhopf, President of Parfums Ciro, and chairman of the Committee on the Use and Marketing of Perfume Products which organized The Fragrance Foundation. Mr. Wiedhopf reported on the activities of the Committee up to date. He explained the reason for selecting the name, The Fragrance Foundation, and its purpose. "The word Foundation has come to mean a non-profit organization which carries on research in a particular field and acts as an information center for the education of people. The word Fragrance, the field in which the Foundation will work, most aptly describes our products," he said. "We, the Committee on the Use and Marketing of Perfume Products, now are ready to turn over to the entire fragrance industry, the work which we have started . . . We know it will benefit your business."

Hugo Mock reported on the legal aspects of the incorporation of The Fragrance Foundation. To become a member of the Foundation he said, a firm or individual must first be a member of The Toilet Goods Association.

The method of operation of the Foundation was given by Miriam Gibson French, Coordinator. She outlined, too, the plans for the next year which include an educational campaign coordinated between retailers, manufacturers, the press, and the consumer. Plans now are being set for a rounded sales training program to be supplied to all retailers for toilet goods salesgirls throughout the country. "Helpful selling ideas will be furnished to all members," she said, "as a result of research done by the Foundation. The Fragrance Foundation has been formed to increase the consumption of perfume products through a comprehensive educational program," she concluded.

Paul Russell, Vice-President of Lucien Lelong, Inc., spoke on the reasons a manufacturer would benefit from becoming a member of the new organization. He gave four reasons: "The Fragrance Foundation will bring forcibly to the attention of retail store executives throughout the country, the volume and profit possibilities of fragrance products, and prepare the soil for more intensive cultivation in the promotion and distribution of our products. Second, the work of the organization will contribute substantially towards the further use of perfume and fragrance products by the public at large, thereby increasing the demand for such products. Third, its formation and support is a modern, progressive step in our industry. Fourth, we have complete confidence in the ability and integrity of the management."

On the occasion of his visit to the offices and plants of Schering Corporation at Bloomfield and Union, N. J., Mr. N. Demetriades, Schering distributor in Greece, met with company officials. Shown here are Dr. John M. McDonnell, vice president of Schering, Mr. Demetriades, and Francis C. Brown, Schering president.

Fox Named Safety Eng. for S. & D.

J. M. Fox, engineering department, has been appointed safety engineer for Sharp & Dohme, Inc., it has been announced by J. M. Waligora, chief Engineer. Mr. Fox succeeds W. S. Stepp who has resigned from the Company to organize a private consulting firm.

A graduate of the University of Pennsylvania with a B. S. in Chemical Engineering, Mr. Fox became associated with Sharp & Dohme in 1946.

In 1943, he was selected as one of 40 science talented youths by the Westinghouse Awards Committee.

Degree Conferred on Zinsser

The Philadelphia College of Pharmacy and Science conferred an honorary degree of doctor of science on John S. Zinsser, Chairman of the Board, Sharp & Dohme, Inc., at its 128th commencement here today "in recognition of his great service in stimulating pharmaceutical research so as to provide dependable medication for the medical and allied professions."

The exercises were held in the auditorium of the College at 43rd St. and Kingsessing Ave., in Philadelphia.

Australian Display

The Australian Government was host, June 24 to members of the essential oil and allied industries, at a reception held in the Australian Display Center, Rockefeller Center, New York. At the reception, a display of Australian eucalyptus was shown to promote sale of eucalyptus oil in the United States. Basic material for the display was prefabricated in Australia.

Upjohn Announces Changes in Branch Office Management

The opening of the new Upjohn Philadelphia branch July 1st results in several changes and promotions in both sales and branch office management. Fernen E. Fox, present Minneapolis branch salesmanager, who has been with the Upjohn sales organization since 1930, has been appointed salesmanager of the new branch. Acting New York Branch Office Manager V. J. Ranney will transfer to Philadelphia as office manager and H. R. Gruber, now office supervisor at the New York branch, replaces Ranney. Arthur Sailer, with Upjohn since 1931 and present southern divisional salesmanager of the New York branch, becomes the new salesmanager at Minneapolis.

and now Baker adds to your Penicillin line—

AQUEOUS PROCAINE PENICILLIN FORTIFIED

...for injection at 24-hour intervals

(ready for the label of the distributing drug manufacturer)

To give you:

- **... High initial levels of Penicillin in the blood stream**
- **... Longer lasting demonstrable blood levels to maintain an *extra* margin of effectiveness**
- **... Trouble-free preparation and injection**

Baker's Aqueous Procaine Penicillin Fortified combines soluble Buffered Potassium Penicillin "G" with repository Procaine Penicillin "G" to provide a high initial blood level quickly after injection, and prolonged demonstrable blood level for a 24-hour period.

When the proper amount of diluent is added, it is possible to withdraw the required number of 1 cc doses each containing 300,000 units of Procaine Penicillin "G" and 100,000 units of Potassium Penicillin "G".

Since no oil is used as a vehicle, there is less pain on injection, no clogging of needles, and easier cleaning. It is not essential for the syringe to be dry.

In the dry state, Baker's Aqueous Procaine Penicillin Fortified is stable for a long period. Under refrigeration it is stable for one week after preparation for injection.

Increase your Penicillin business and profits by labelling and distributing Baker's Aqueous Procaine Penicillin Fortified.

J.T. Baker Chemical Co., *Fine Chemical Division*, Phillipsburg, N.J.

Baker's

Baker's Chemicals

C. P. ANALYZED • FINE • INDUSTRIAL

"In special dispensing bottle"—This phrase helps swing her to your brand. Bottle illustrated is a 5-ounce oval No. A-7179 with Empress closure.

She wants style plus convenience — You want more sales

DURAGLAS BOTTLES SATISFY BOTH!

Give her an extra reason for buying and your reward is extra sales!

Take the Duraglas bottle pictured. It gives a toiletry preparation like hair oil the added selling point of convenient *drop by drop* dispensing.

It's typical of our more than 1400 different drug, chemical and toiletry stock-mold Duraglas containers. Each one is functioneered for high consumer sales appeal . . . low original cost . . . top efficiency on your filling line.

Everything you need—bottles, closures, cases, expert designers and engineers—are at this single source of packaging satisfaction, Owens-Illinois. Let's discuss your needs. A fully-staffed branch office is near you. Prompt service.

Duraglas Bottles are Protectors of Quality

TRADE MARK REG. U.S. PAT. OFF.

OWENS-ILLINOIS GLASS COMPANY • TOLEDO 1, OHIO • BRANCHES IN PRINCIPAL CITIES

Bartlett on Nat. Industrial Conference Board

Edwin R. Bartlett, president, Hooker Electrochemical Company, was elected a board member of the National Industrial Conference Board for the coming year at the Board's thirty-third annual meeting.

Dr. Veldee Joins Hyland Labs.

Dr. Milton V. Veldee has retired as Chief of Biologics Control Laboratory of the National Institute of Health and has joined Hyland Laboratories, Los Angeles, Calif., according to G. P. Snow, president of Hyland. Dr. Veldee was associated with the National Institute of Health since 1929, and was a commissioned officer of the U. S. Public Health Service since 1921. He was Chief of Biologics Control since 1940 After receiving his M.D. degree at Harvard, Dr. Veldee spent a year at Johns Hopkins School of Hygiene and six months with the Red Cross before entering the government service.

Executives Appointed by Grove Labs.

Executive appointments for the expanded operations of Grove Laboratories Inc., have been announced for the recently acquired F. W. Fitch Company.

L. A. Smith, vice president and comptroller, will be in charge of all manufacturing activities of the combined companies. Frank F. Bell is director of sales for all operations. A. S. Bland Jr., is sales manager, Robert J. Piggott, advertising manager and Gene K. Foss merchandising manager.

The Fitch business will be known as F. W. Fitch division of Grove Laboratories, Inc.

Bunting, Chairman of Board For Noxzema

Dr. George A. Bunting, founder and president of the Noxzema Chemical Company, celebrated the thirty-fifth anniversary of his business on Wednesday, June 22, at the same time he turned over active management and the keys of the new Noxzema factory to his son, G. Lloyd Bunting. The 79-year-old former druggist, will serve as Chairman of the Board of Noxzema, his son succeeding him as President.

Dr. George Bunting presenting the key of the new Noxzema factory to his son, G. Lloyd Bunting.

Starting first as a country teacher on the Eastern Shore of Maryland, then entering the drug field as a $4.00 a week errand boy who eventually bought out the drug store where he worked, he resisted the trend towards large drug product combines, and after thirty-five years of depressions and reverses, today turns over a $5,000,000 a year single-product expanding business to his son, G. Lloyd Bunting.

As a vivid example of American free enterprise, Dr. Bunting's career reads like an Horatio Alger story. In the late nineties he was persuaded by a doctor to give up teaching, borrowed $250 from the doctor and enrolled in the University of Maryland School of Pharmacy, graduating as valedictorian in 1899.

In 1912 he began to experiment with his own skin cream formula. The first batches of Noxzema were prepared in a coffee urn in the back room of his drug store. No one has ever been able, successfully, to break down and analyze the basic Noxzema formula. The product was first called Dr. Bunting's Sunburn Remedy, but when a customer advised that the cream had "knocked his eczema," the name was changed to Noxzema.

A small office was rented on Lafayette Street in Baltimore at $27 a month, with five people doing all of the work. in 1925, after thirteen years, Dr. Bunting was still drawing a salary of only $50 a week. In 1926, things began to happen. Sales had reached an annual volume of $100,000, and a long term drive for national distribution began.

Late in 1926 the product was introduced into Greater New York. In 1928 Chicago and the Midwest were opened up. In 1930, the South and the Pacific Coast were invaded. In 1938 national distribution was completed by opening up the Prairie and Rocky Mountain states. Sales volumes by 1938 had reached $3,000,000 a year. The Canadian market was opened up in 1932, and the sales pattern followed the same as in the United States.

Erba Moves

Carlo Erba, Inc., pharmaceutical chemists and GI. VI. Emme Perfumes have announced the removal of their laboratories and offices to 322 E. 44 St., New York.

Norwich Sales Shifts

H. T. Hildebrandt, vice president in charge of sales of the Norwich Pharmacal Company, has announced that Everett L. Zimmermann has been transferred to Norwich, N. Y., from New York City, where he will be a member of the general sales department and assist in the planning and development of sales. Mr. Zimmermann has been with Norwich for over seventeen years.

Philip E. Schmitt, for nineteen years a Norwich representative takes over the district three managership relinquished by Mr. Zimmermann.

Dr. Selman A. Waksman (center) discoverer of Streptomycin, receiving "1949 Research Award" of the APMA at Hot Springs, Va. Representing the Association is Dr. Randolph T. Major (right) vice president of Merck & Co., Dr. Theodore G. Klumpp (in white suit) the Association's president, and Dr. Russel J. Fosbinder, president of the Maltbie Chemical Co.

"there's a **Bonus** *in doing* **Business** *with* **National Can"**

You get ample supply . . .
able service . . . when

NATIONAL CAN

is your source of

METAL CONTAINERS

When you contract with National Can, you get more than an ample and unfailing supply of quality metal containers. You get a further bonus in the form of National Can service — service that helps you protect against mechanical breakdown and bacteriological spoilage.

Turn to National Can for metal containers of all sizes and shapes—for packaging foods, cosmetics, drugs, paints, oils or any substances that require the added protection or lithographed sales appeal of metal. For with National Can you benefit through the accrued experience of nearly fifty years in container manufacture. Applied to your needs by our skilled and closely cooperating service departments, this experience will serve you well—whether selecting or designing a container for your present product, or preparing to package a new product.

Invest a few minutes of your time to learn fully how National Can supply and service can pay off for you. Just call or write our nearest sales office or plant.

NATIONAL CAN

CORPORATION

Executive Offices: 110 EAST 42nd STREET, NEW YORK 17, N. Y.

Sales Offices and Plants: Baltimore, Md. • Chicago, Ill. • Maspeth, N. Y. • Hamilton, Ohio • Boston, Mass. • St. Louis, Mo.

7539

Ciminera in New Post

Joseph L. Ciminera, has been appointed to the newly created position of research biometrician, it has been announced by Dr. L. Earle Arnow,

JOSEPH L. CIMINERA

medical research director, Sharpe & Dohme, Inc.

In his new position, Mr. Ciminera will cooperate with other departments of the company in analyzing biological data statistically.

Greek Distributor Visits Schering

Schering Corporation, has been successful in developing its foreign trade through its policy of informing its distributors and subsidiaries all over the world concerning recent developments in American Schering research. Special efforts have been put forth to acquaint them with the various techniques used in the preparation of the newly developed Schering pharmaceutical specialties which they are now distributing.

Recently, Schering Corporation was visited by Mr. Nick Demetriades, partner of the firm of V. S. Velissaratos of Athens and, since 1946, Schering distributor in Greece.

While at the home offices, he met with Dr. John N. McDonnell, vice president, and Mr. Francis C. Brown, president. He learned of the company's participation in the development of radioactive isotopes for use in medicine.

Anne Wright Leaves Schiaparelli

Anne Wright, for nearly six years vice president and general sales manager of Parfums Schiaparelli, Inc., has announced that she has will retire from the company at the end of July. She was formerly sales manager of Germaine Monteil Cosmetiques Corporation. Future plans will be made known at the end of the year.

Republic Seitz Filter Buys Hormann & Co.

F. R. Hormann & Company Inc., has announced that it has completed negotiations which affiliates the firm with Republic Seitz Filter Corp. of Newark, N. J.

Hormann will continue to manufacture its complete line at the plant in Glen Cove, L. I., although research and engineering departments will be merged with those of Republic in Newark

The sales activities of the Hormann Company will continue under the direction of Henry E. Stapowick, and the sales of the Republic Seitz Filter Corp., will be by Francis X. Dealy. Both organizations will operate from the Newark office at 17 Stone St.

Hadley Named V.P.

Parfums Schiaparelli, Inc., have announced the appointment of Arthur G. Hadley, Pacific Coast representative, to the position of vice president and general sales manager.

Mr. Hadley moves into the position left vacant by the retirement of Anne Wright.He formerly had been associated with Grenoville Perfumes and Bellin's Wonderstoen.

de Massy V.P. of Bristol Lab. Ltd.

Bernard R. deMassy was elected vice president of Bristol Laboratories of Canada Ltd., at a meeting of the Company's board of directors, it has been announced by Frederic N. Schwarz, president.

Mr. deMassy joined Bristol Laboratories Ltd. in October 1948, as head of the company's operations in Montreal.

Pfizer Appoints Albright Midwest Field Sales Mgr.

Franklin B. Albright, for the past eleven years a sales representative for Chas. Pfizer & Company, Inc., has been appointed field sales manager for the Midwestern region. He will be located at the company's new offices at 425 N. Michigan Ave., Chicago.

James J. Clark Retires

James J. Clark, vice president of the Liggett Drug Company retired from that company July 1.

Mr. Clark was first with Rexall Drug and the later served in various executive capacities. He had served the Liggett Company for over forty-two years.

Squibb Appointment

The appointment of Charles O. Kendall as director of the newly created division of product planning of E. R. Squibb & Sons has been announced by

CHARLES O. KENDALL

Roland J. Dahl, vice president in charge of research and development.

Mr. Kendall's division will be responsible for evaluations of existing Squibb products; the definition and integration of factors pertinent to new or improved products, and the non-technical aspects of the planning of new products.

The new division will include four departments as follows; formula planning, Dr. L. V. Blubaugh, manager; package planning, A. R. Schettel, manager; label development, J. E. Aurelius, manager; and package design, J. S. Grant, manager.

West Coast's First Ess. Aromatics Plant

F. Ritter & Company announces the start of construction of an additional essential aromatics at Los Angeles, Cal., which will serve as company headquarters. The new air-conditioned buildings will comprise one of the most modern and complete plants in America for the manufacturing of flavorings, and essential aromatics.

The plant is located at 4001 Goodwin Ave., Los Angeles.

Callahan in Bristol Post

Bristol Laboratories Inc., of Syracuse, N. Y., has announced the appointment of John E. Callahan as purchasing agent. Mr. Callahan succeeds Leonard S. Fulmer, vice president in charge of purchasing who has retired.

A member of the staff of Bristol Laboratories since April 1946, Mr. Callahan was formerly assistant buyer with General Electric Company in Bridgeport for three years.

FLORASYNTH SPECIALS

ELÁN TIBET
JASDOUX EXCELLENT
MEADOW BOUQUET
SHALFLEUR

for particular perfumes and toilet waters.

Florasynth Research Laboratories are always at your service for the development of more practical and quality-improving materials for your production requirements.

TRADE PURITY FLORASYNTH MARK UNIFORMITY

Florasynth LABORATORIES, INC.

CHICAGO 6 • NEW YORK 61 • LOS ANGELES 13

DALLAS 1 • DETROIT 2 • MEMPHIS 1 • NEW ORLEANS 13 • ST. LOUIS 2 • SAN BERNANDINO • SAN FRANCISCO 11

Florasynth Labs. • (Canada Ltd.) – Montreal • Toronto • Vancouver • Winnipeg – Florasynth Laboratories de Mexico S. A. Mexico City

Grove Acquires Pfunder's Tablets

Hard on the heels of its purchase of the F. W. Fitch Company, The Grove Laboratories Inc., St. Louis has announced that it has acquired the rights to manufacture and sell Pfunder's Antacid Tablets.

Dr. Pacini with Warburton Moss

Dr. Albert B. Pacini has joined the advisory panel of Warburton Moss & Company as consultant on cosmetic and pharmaceutical production and process development, plant design and organization.

Argentine Penicillin Plant

Argentina's first pharmaceutical plant to be designed primarily for the large-scale production of penicillin was completed June 10. The $4,000,000 plant was designed and built by E. R. Squibb & Sons.

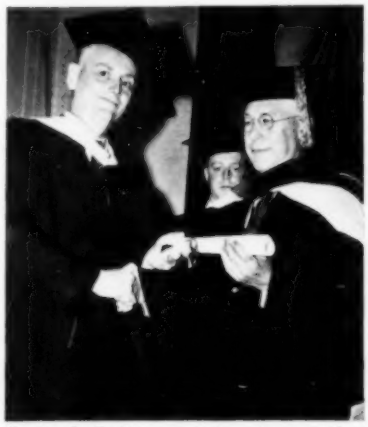
The new drug manufacturing center consists of four buildings with a total square footage of 78,447.

President Juan Peron of Argentina, speaking at the plant's dedication, cited the Squibb plant as "one of the most significant steps in the industrialization of Argentina."

Following President Peron's address, Theodore Weicker, Jr., president of E. R. Squibb & Sons, Inter-American Corp., pointed out that the whole project was conceived less than 24 months ago. The plant makes it possible to supply penicillin at prices well within the means of every working man and woman in the Argentine.

Carson Frailey Honored

Dr. Carson P. Frailey executive vice president and secretary of the American Drug Manufacturers Association received the Honorary Degree of Doctor of Laws from Southeastern University, Washington, D. C. June 9.



Carson P. Frailey, executive vice president ADMA shown receiving Honorary degree of Doctor of Laws from president Leroy J. Maas of Southeastern University.

A.P.M.A. Golf Winners

Joseph A. Huisking, Fritzsche Brothers, won Tournament Low Net at the recent annual meeting of the American Pharmaceutical Manufacturers Association, and thus won a second leg on the Monsanto Cup which must be won three times for permanent possess ion. Bruce Puffer, Kimble Glass Division, took the Tournament Low Gross with a 78, and Mrs. C. H. Predmore took the Low Gross in the Ladies Flight with 91. Other winners are: First Flight: Low Gross, L. H. Bodman, Benzol Products Co.; 1st Low Net, Lee Klemmer, Modern Medicine; 2nd Low Net, V. E. Williams, Monsanto Chemical Company. Second Flight: Low Gross, Harrison Fraker, Topics Publishing Co.; 1st Low Net, Dr. L. Rhoem, The Dow Chemical Company; 2nd Low Net, J. K. Gorman, G. D. Searle & Co. Third Flight: Low Gross, Floyd K. Thayer, Abbott Laboratories; 1st Low Net, Dr. J. Bates, Ciba Pharmaceutical Co.; 2nd Low Net, Dr. R. J. Fosbinder, Maltbie Chemical Co. Fourth Flight: Low Gross, Dean Hildebrandt, McKesson & Robbins; 1st Low Net, Allen Newcomb, N. W. D. A.; 2nd Low Net, Ralph Henderson, Winthrop-Stearns. Fifth Flight: Low Gross, K. G. Hewitt, Kimble Glass Division; 1st Low Net, E. L. Drach, Abbott Laboratories; 2nd Low Net, Robert Smith, Medical Economics. Ladies Flight: 1st Low Net, Mrs. J. A. Huisking; 2nd Low Net, Mrs. Lee Klemmer.

The Longest Drive was won by O. B. Newton, C. B. Fleet Co.; Closest to Pin by J. L. Rogers, Central Pharmacal Co.; and Lowest Number of Puts by C. G. Baber, C. B. Fleet Co.

The tournament, under the direction of Harold F. Cummings, Vitamerican Oil Corporation, and Charles H. Slater, of J. T. Baker Chemical Co., was the largest ever held, there being 96 starters.

At the dedication of the new E. R. Squibb plant in Argentina shown around the microphone from left to right are Argentine President Juan Peron, Theodore Weicker, Jr., president of Squibb & Sons Inter-American Corp., Argentine Health Minister Dr. Ramon Carrillo, and Alejandro Figueroa, a director of Squibb & Sons de Argentine, S. A.

Firmenich Booklet

Firmenich & Company, has announced its latest technical booklet which includes a comprehensive listing of its specialties together with straight aromatic chemicals.

Copies of the booklet may be obtained by writing Firmenich & Company, 250 W. 18 St., New York 11, N. Y.

Houston Joins E. & A. Martin

E. Leslie Houston, formerly vice president and general manager of Helfrich laboratories of Canada Limited, Toronto, has joined The E. & A. Martin Research Limited. Mr. Houston will be in charge of the private label cosmetic division.

Sharp & Dohme Appointment

The appointment of W. J. Rauch, foreman of the pressroom, as superintendent of the printing department, has been announced by H. W. Gadsden, director of pharmaceutical production and engineering, Sharp & Dohme Inc.

He succeeds H. C. Susemihl who has resigned to accept the position with N. W. Ayer & Son, Inc., Philadelphia. Mr. Susemihl had been with Sharp & Dohme for twenty years.

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The Standard for Over 50 Years

Italian Talc is, and always has been, the recognized standard in the cosmetic industry. In France, as in other countries, users of talc turn to Italy, where the natural rockstone produces a superfine product. It combines in the highest degree the features most desired. It has an unusual, silky texture.

The world's leaders use only Italian Talc.

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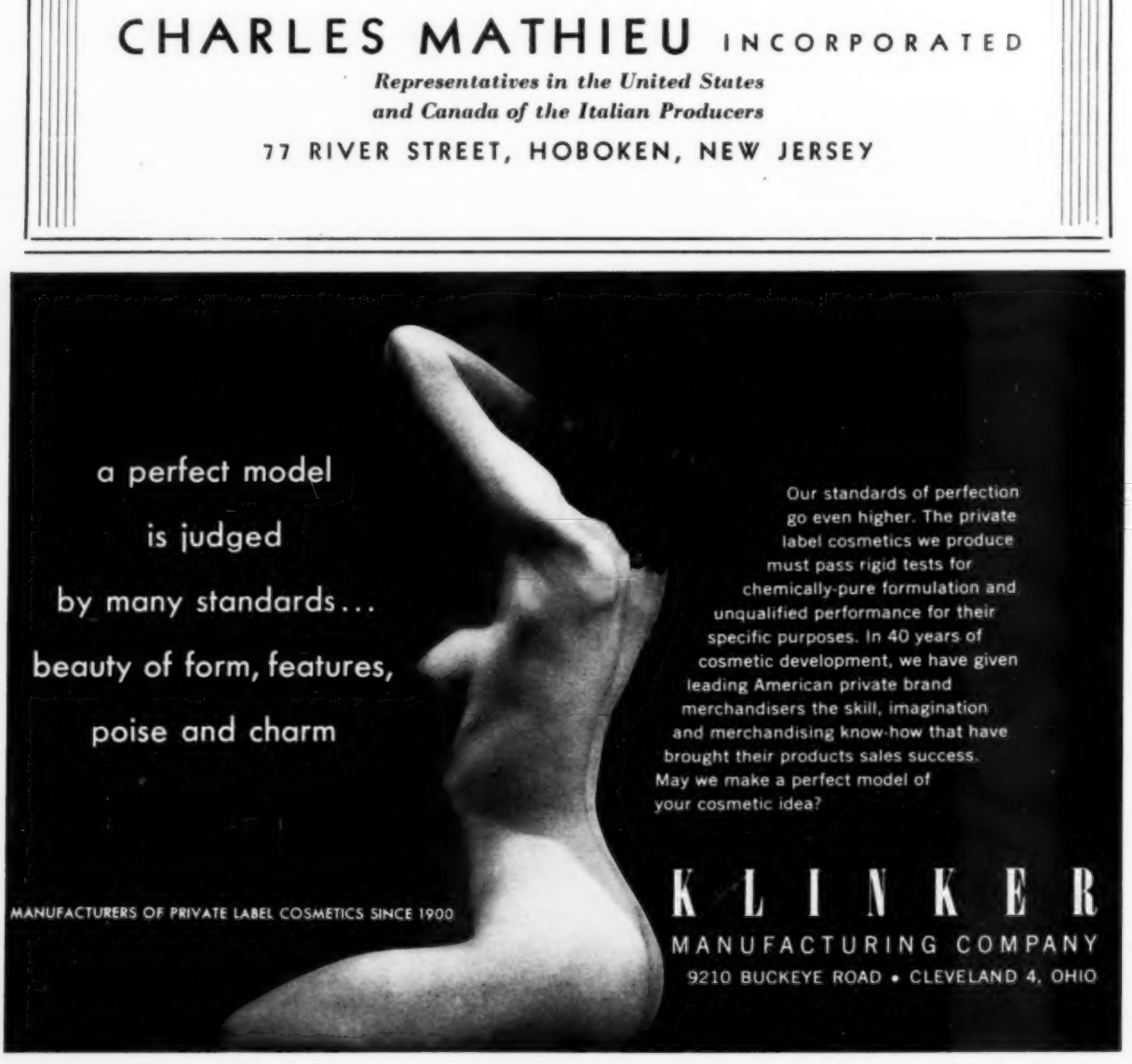
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is judged
by many standards...
beauty of form, features,
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Our standards of perfection go even higher. The private label cosmetics we produce must pass rigid tests for chemically-pure formulation and unqualified performance for their specific purposes. In 40 years of cosmetic development, we have given leading American private brand merchandisers the skill, imagination and merchandising know-how that have brought their products sales success. May we make a perfect model of your cosmetic idea?
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Sales Conference at Upjohn

Forty-two salesmen, representing all branches of the Upjohn Company, were in Kalamazoo the week of June 12 for a sales conference conducted by Warren K. Allen, head of the sales education department. The program featured talks by company executives and tours of the new plant on Portage Road, five miles south of Kalamazoo.

During the past six months a total of 40 people have been added to the technical staffs of the Upjohn Company.

Desoxyribonucleic Acid Available

Desoxyribonucleic acid, the cell component basic to inheritance, has been added to the Schwarz Laboratories, list of fine chemicals that play important roles in the life processes. Originally called thymus nucleic acid because the "sweetbreads" or thymus glands of calves were the usual source, desoxyribonucleic acid, or DNA, is now known to occur in the genes of all cell nuclei. The related ribonucleic acid, RNA, or yeast nucleic acid, also obtainable from Schwarz, plays an important part in protein synthesis. These two nucleic acids can be said to be essential to the continuance of life and to the growth of living things. Further information on this substance may be obtained by writing to Schwarz Laboratories, Inc., 202, E. 44th St., New York 17.

Guenther Lectures on Coast

Presenting four company-sponsored lectures with colored motion pictures—two on "The Production of Essential Oils in Africa" and two on "Essential Oil Production in the Western Hemisphere"—Dr. Ernest Guenther, Vice president and technical director of Fritzsche Brothers, Inc., completed his current Pacific Coast series with a final talk before the Scientific Section of the California Cosmetic Association June 28th. In July he will participate in the Institute of Food Technologists' Convention in San Francisco where he will give an illustrated talk on "Citrus Oils and Their Methods of Extraction."

Under the able direction of Fritzsche Brothers' Pacific Coast representative, Stanly Crouch, with assistance from John T. Brickner, manager of the San Francisco Branch, every provision was made for the comfort and pleasure of those attending. As a consequence, Dr. Guenther presented his talks to capacity audiences of customers and their wives and friends—many from distant towns—in Seattle's Hotel Olympic, at the Hotel Multnomah in Portland, in San Francisco's Sir Francis Drake and Los Angeles' Biltmore. At the latter, under conditions of temperature and humidity that would have discouraged most persons' attendance, Dr. Guenther's audience was, in his own words, "the largest I ever had in all my experience of lecturing." At this meeting, during intermission, the audience was briefly addressed by Dr. A. J. Haagen-Smit, Professor of Bio-organic Chemistry of the California Institute of Technology and author of that chapter of Dr. Guenther's "The Essential Oils" which deals with their chemistry, origin and function in plant life. Dr. Haagen Smit's remarks reflected his high estimation of the principal speaker's great service to the essential oil using industries.

Dr. Guenther is expected to return to the New York office late in July to put the finishing touches on his next three volumes of "The Essential Oils."

Dr. Maurice L. Tainter, (Left) director of the Sterling-Winthrop Research Institute, shown receiving a certificate of membership to the Society of Pharmacology and Therapeutics of the Argentine Medical Association. Dr. Manuel Litter, president of the Society is at the right, and Dr. Dora Litter, his wife, is in the center.

Committee Chairmen Appointed for Annual Meeting

Robert B. Magnus, Magnus, Mabee & Reynard, Inc. Chairman of the DCAT, has announced the following chairmen to head committees for the 59th Annual Meeting of the Drug, Chemical and Allied Trades Section of the New York Board of Trade, to be held at Shawnee Inn, Shawnee-on-the Delaware, Pa., on September 23, 24.

Banquet Committee—L. I. Volckening, The Ivers-Lee Co.

Business Program Committee—Fred J. Stock, Chas. Pfizer & Co., Inc.

Evening Entertainment Committee—Charles P. Walker, Jr., Citro Chemical Company.

Golf Committee—Harold C. Green, L. Sonneborn Sons, Inc.

Greetings Committee—Carle M. Bigelow, Calco Chemical Division, American Cyanamid Co.

Ladies' Card Party Committee—Chas. M. Macauley, Pro-phy-lac-tic Brush Co.

Ladies' Golf Committee—Mrs. Mel C. Eaton.

Memorials Committee—Wm. S. Auchincloss Oil, Paint & Drug Reporter.

Miscellaneous Sports Activities—Claude A. Hanford, Pharmaco, Inc.

Publicity Committee—Ira P. MacNair, MacNair-Dorland Co.

Transportation Committee—Robert L. Hutchins, Commercial Solvents Corporation.

Reception Committee—Clark L. Rodgers, Owens-Illinois Glass Co.

Registration Committee—J. P. Remensnyder, Heyden Chemical Corp.

Dr. Volwiler Honored by Northwestern

Dr. Ernest H. Volwiler, executive vice president of Abbott Laboratories, was awarded an honorary degree of doctor of science by Northwestern University at the 91st annual commencement at Evanston, Ill., on June 13.

Dr. Volwiler was presented by Dr. Robert K. Summerbell, professor of chemistry and chairman of the chemistry department, and the award was made by Dr. Franklyn B. Snyder, president of the university.

Roche Research Club

Members of the senior technical staff of Hoffmann-La Roche Inc., have organized the Roche Research Club which is associated with the Scientific Research Society of America. At a dinner June 2 at the Essex Club in Newark, Drs. George A. Stetson and Donald B. Prentice, chairman and director respectively of RESA, presented the club's charter and welcomed the new members.

S. & D. Research Lab.

Work is to be started in the fall of this year for the new Sharp & Dohme research laboratories West Point, Pa., the building is expected to be ready for occupancy by the spring of 1951.

The structure will contain more than 110,000 square feet of floor space, more than twice the space now devoted to research at the Company's Glenolden laboratories.

Bauer, Mgr. of Monsanto Process Section

The appointment of Russell L Bauer as manager of the process section of the general engineering department of Monsanto Chemical Company has been announced by T. W. Nichols, director of general engineering.

Mr. Bauer, a native of St. Louis, joined Monsanto in 1937. In 1941 he joined the du Pont de Nemours Company and served successively as chemical engineer, plant chief chemical engineer, and assistant process manager of the Military explosives division.

Mr. Bauer rejoined Monsanto in 1945 as a member of the general development department.

Towns Transferred by Schering

Schering Corporation of Bloomfield, New Jersey, have announced the appointment of Edward Ros Towns as manager of the Eastern South American

E. R. TOWNS

division. His territory is comprised of Argentina, Uraguay and Paraguay, and is liaison to Brazil.

Prior to this appointment Mr Towns. who first became associated with Schering Corporation in March 1946, held the position of Division Supervisor for the Central American countries from Guatemala to Panama and of the Caribbean territory, exclusive of Cuba.

Born in New York City of Spanish descent, he attended Columbia University, specializing in marketing. In December 1941 he enlisted in the United States Army. In his four years of service Mr. Towns was commissioned as an officer in the Ordnance Department.

BIMS Golf Tournament

On the hottest day in June over one hundred members of the BIMS went out to Baltusrol in Springfield, N. J. and, with the greens being lightning fast, some mighty good scores were compiled.

Paul Dunkel, who heads his own company, got low gross on a very nice 74, while Pel Livsey of Avon Allied Products and Louis Bezard of Schiaparelli staggered through with low nets.

The other prize winners were—Leonard Schultes, Hewitt Soap Company; Edward Field; Alfred Egerter, Libbey-Owen-Ford Glass Co.; Walter S. Nuckols, Swindell Brothers; Russell F. Rooks, Avon Allied Products; M. Seltzer; Arnold F. Anderson, Roubeshez Import Co.; Ross A. White, E. N. Rowell Co.; Charles Alexander; Albert C. Burgund, Carr-Lowrey Glass Co.; William Morphy; Wallace A. Bush, Ungerer & Company; C. R. Keeley, Beauty Fashion; W. H. Davis; John E. Gabrielsen, Avon Allied Products; Ivon H. Budd, Ungerer & Company.

The next golf tournament is at Winged Foot on July 26th, to be followed by one on August 25th at North Hempstead Country Club.

Dr. Schumann in Key Merrell Post

The appointment of Dr. E L.Schumann to a key position on the organic chemistry research staff of The Wm. S. Merrell Company has been announced by Thurston Merrell, president of the Cincinnati pharmaceutical concern.

Dr. Schumann will conduct research studies at Merrell on the synthesis of new medicinal agents.

Charley in Chicago Civic Post

M. F. Charley, president of Standard Pharmacal Company, Chicago, has been appointed a member of the Chicago Plan Commission by Mayor Kennelley.

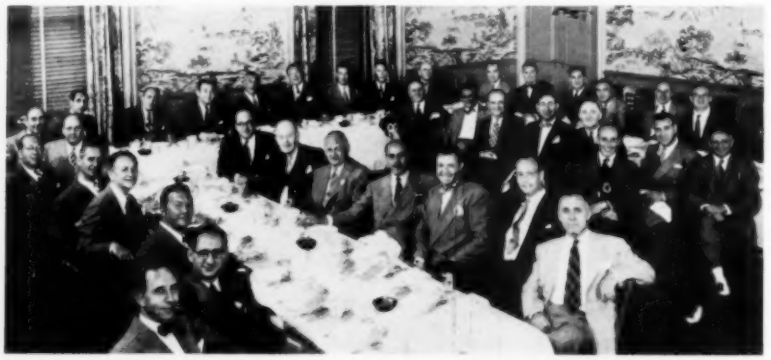
Salesman's Assn. Golf Winners

The winners of golf prizes at the June outing of the Salesmen's Association of the American Chemical Industry which took place at the Bonnie Briar Country Club, Larchmont, N. Y., are as follows:

Low gross-Flight A: H. Robert Miller, White Metal Mfg. Company; Second Low gross-Flight A: J. B. Meyler, Westvaco Chemical Corp; Low net-Flight A: R. H. Gribel, Harshaw Chem. Corp; Low gross-Flight B: R. E. Horsey, Sindar Corp; Low net-Flight B: Philip A. Hunt, Philip A. Hunt Company; Low Gross-Flight C: R. T. Reid, Witco Chem. Company; Low net-Flight C: Howard Emmons, Dye Specialties Corp. Kickers were: Joseph C. Abeles, Edwin Jacobi, P. C. Reilly and H. P. Smith.

Longest Drive: J. B. Eakins. Nearest to pin: Walter S. Clark.

Pictured below are friends of Milton Small, president of Marlin Industrial Division, The Marlin Fire Arms Company, who gathered together June 8, at the Yale Club of New York, to celebrate his birthday.



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PERFUMERY MATERIALS

D & O can supply either the finest in raw materials or in perfume compounds, depending on the particular requirements of the creative perfumer.

☆ **COLONIAL 14**—Oriental bouquet with an overtone of Jasmin.

☆ **FLORIA 529**—Muguet-rose bouquet, always popular.

☆ **KAPRIFOL**—Modified honeysuckle odor.

☆ **SOIREE 317**—Floral with dry, woody, oriental undertone.

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ATLANTA • BOSTON • CHICAGO • CINCINNATI • DALLAS • LOS ANGELES • PHILADELPHIA • ST. LOUIS • SAN FRANCISCO

ESSENTIAL OILS • AROMATIC CHEMICALS • PERFUME BASES • VANILLA • FLAVOR BASES

BORNYL ACETATE 95% / 97%

Now offered at a history-making low price! Bornyl Acetate, naturally present in Oil Pine Needles Siberian (Abies Siberica) is ideal in Compositions where a fine, fresh Pine note is desired. Felton's Bornyl Acetate is liquid at room temperature and is stable in soap. NOW it is not necessary to compromise with the harsh, crude Iso-Bornyl Acetate. *Use Bornyl Acetate by Felton!*

FELTON Quality

BORNYL PROPIONATE pure

A Bornyl ester, long-lasting and refined of odor for new and better Pine Needle effects. Bornyl Propionate, long known and used by master perfumers, now, because of its new low price and ready availability, recommends itself to the attention of perfume compounders in every price field.

FELTON Quality

MANUFACTURERS OF AROMATIC CHEMICALS, ESSENTIAL OILS, PERFUME OILS, AND FLAVORS

FELTON

CHEMICAL COMPANY, INC.
599 Johnson Avenue, Brooklyn 6, N. Y.
Branches in Boston • Philadelphia • Los Angeles
St. Louis • Chicago • Montreal • Toronto

Hart Receives Cuban Honor

John W. Hart, director of the new products division, Sterling-Winthrop Research Institute, has been named a commander of the Order of Carlos Finlay by the government of Cuba. Mr. Hart is the founder of the Premio Hart prize at the University of Havana for the study of the life and work of Carlos Finlay.

Eaton Named Chairman

Melvin C. Eaton has been named chairman of the board of Eaton Laboratories, Norwich subsidiary, and Howard A. Summer has been named president. At the same time Lewis J. O'Shea, formerly with Emerson Drug Company, has been named vice president in charge of sales.

Cutter Fined

Cutter Laboratories pleaded nolo contendere June 24 in San Francisco Federal Court in a hearing arising out of the contamination found a year ago in flasks prepared and shipped by the laboratory from Berkeley, California. In view of the cooperation of the company with the Food and Drug Administration in the recall program, Judge Erskine assessed the firm the nominal fine of $100.00 on each of the six shipments.

Officials of the company stated that the laboratory pleaded nolo contendere since it would serve no useful purpose to put the company and the government to the expense of a long drawn out hearing to establish a legal opinion as to whether the contamination occurred before or after shipment. The fact remains, according to laboratory officials, that, to their deep regret, the contamination actually did occur, in spite of all precautions against just such a happening.

When the recall program got under way, Cutter Laboratories not only cooperated with the Food and Drug Administration in recovering the flasks in question—they went further and voluntarily recalled from the market all solutions produced in the same department as a safeguard against even the remote possibility that other flasks might have been contaminated.

Henshall Head Phila. Controllers Inst.

S. T. Henshall, controller, Sharp & Dohme, Inc., has been elected director of the Philadelphia control, Controllers Institute of America.

Named Treasurer of Chess Inc.

Joseph A. Danilek, president of Mary Chess, Inc., has announced the appointment of Mary Forman as treasurer of the company.

Born and educated in Scotland, Miss Forman came to this country in 1929 and in 1934 joined Mary Chess, two years after they were incorporated. She had held various positions with the firm and had contributed greatly to the growth of the business.

Blanche Genet Advanced

Helena Rubinstein, Inc., has appointed Blanche Genet as executive assistant to Mala Rubinstein, director of salon for the firm. Miss Genet was formerly associated with Elizabeth Arden and was director of the Dorothy Gray New York Salon for several years.

Anchor Hocking Moves in Phila.

Anchor Hocking Glass Corporation's Philadelphia display and sales offices are now installed at 2017-28 Philadelphia Savings Fund Building at Twelve South Twelfth Street.

The new offices combine, for the first time in Philadelphia, facilities for display and sales of Anchor Hocking's tableware, household, restaurant and bar glassware, glass containers and its extensive line of metal and plastic closures. The move was made in order to more efficiently handle increased requirements caused by steady expansion of the Corporation's business in the Philadelphia area.

The new Philadelphia Office is furnished in the modern manner, in keeping with the design of the streamlined 36-story Philadelphia Savings Fund Building in which the office is situated, and in keeping with Anchor Hocking's program of progress in developing more efficient and attractive sales offices.

Package Engineer

G. W. Sands, who has been associated with Elizabeth Arden, Richard Hudnut, Pinaud, Northam Warren and American Home over a period of years, in a purchasing and packaging design capacity, has established his own business as a packaging engineer and purchasing consultant. The address is 285 Madison Avenue, Suite 1608, and telephone is MU 5-1788.

Owens-Illinois Promotions

Promotions of two men to positions of branch managers and elevation of two offices from the sub-branch to the full-branch status, have been announced by E. F. Schafer, general branch manager, of Owens-Illinois glass container division.

Frank Jones, Jr., has been named manager of the Richmond, Va., Branch and H. W. Prewitt has been appointed manager of the Buffalo, N. Y. Branch.

Frank Jones, Jr., joined Owens-Illinois in February 1941 as a general sales trainee in Toledo. In April of that year, Mr. Jones was named to the sales staff of the New Orleans, La., office, where he remained until September 1943, when he was transferred to the Atlanta office. In 1944, Mr. Jones moved to the Charlotte, N. C., office, where he was a salesman until entering the U. S. Army in March 1945.

Joins Ungerer 25 Year Club

With the completion of twenty-five years continuous service George R. MacDonald, West Coast representative for Ungerer & Company, Inc., was elected a member of the firm's "Quarter Century Club."

An engraved gold wristwatch was sent to Mr. MacDonald, by F. H. Ungerer, chairman of the board as a token of the company's appreciation for his long and faithful service.

At the present time Mr. MacDonald is in charge of Ungerer's West Coast branch office which is located at 3757 Wilshire Blvd., Los Angeles 5.

Frank Mallett

Frank A. Mallett, retired vice president of Standard Chemical Company, died June 21 of a heart ailment after a three month confinement at Iowa Methodist Hospital. He was sixty-five years old.

Morris L. Weiss

Morris L. Weiss, secretary and treasurer of the Standard Drug Company, Newark, N. J., died June 17 in that city. Mr. Weiss had occupied the position of secretary and treasurer of the drug company for more than sixteen years,

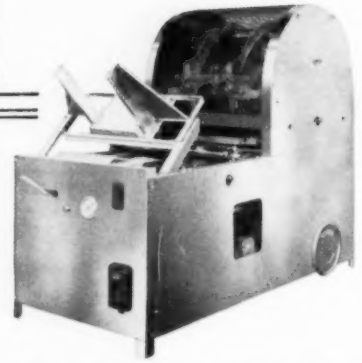
☆ *Announcement* ☆

FRANK D. PALMER, Inc., CHICAGO

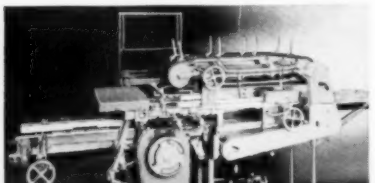
is now a division of

PACKAGE MACHINERY COMPANY

SPRINGFIELD, MASSACHUSETTS



Palmer *Continuous Motion* Carton Former. Delivers perfectly formed and sealed cartons at speeds as high as 135 per minute.



Model FA
High-Speed Adjustable Wrapping Machine. The most widely-used wrapping machine in the packaged goods field.

Through a recent consolidation, Frank D. Palmer, Inc. of Chicago has become a division of the Package Machinery Company of Springfield, Massachusetts.

The Package Machinery Company's extensive line of wrapping machines serves a large number of the users and potential users of Palmer carton forming machines. By uniting our organizations we are, therefore, in a better position than ever to render a broad service to the packaged goods industry.

The sales staffs of both organizations will continue unchanged, each specializing in its particular field.

If you are seeking greater economies and a better selling package through improved cartoning and wrapping methods, get in touch with our nearest office.

PACKAGE MACHINERY COMPANY, Springfield 7, Massachusetts

NEW YORK CHICAGO BOSTON CLEVELAND ATLANTA DALLAS
DENVER LOS ANGELES SAN FRANCISCO SEATTLE TORONTO MEXICO, D.F.

PACKAGE MACHINERY COMPANY

Over a Quarter Billion Packages per day are wrapped on our Machines

Production Forum

By FRANCIS CHILSON
Industrial Consultant

Management by Election

My little homily on management by election has provoked the following diatribe. How the writer could leap to such far fetched assumptions from my article is beyond me. His commentary is published because it is a good illustration of the type of thinking that caused the worst forms of unionism from which we are now suffering, and further, because it illustrates how little some people know about what's going on in industry today. Thank God the majority of employers do not think about labor as my correspondent does. "Dirty hands and idle minds" Forsooth!:—

"So you think you would improve Management by making the guiding heads the tool of a 'popularity contest!' We vote for the boss! My! My! Can you imagine how well the General Motors Corporation might be run by a Walter Reuther, who would probably win any election from 'the people in an organization.' Anything in the form of dividends would be divided among the folks with dirty hands and idle minds . . . you would have an industry guided by the aspirations of workers, not by those who try (more or less sincerely) to guide it toward customer preference because customer preference begets profit. Your rank and file, with his greatest hopes levelled toward more time off, more dollars per hour and less production per hour, stultifies the one essential goal of industry, and that is, make a good product, make people want it, and keep improving it, and aim to reduce the cost of it.

"I, too, lived some time under a grasping management, and resented it, but I believe that sort of boss is as outmoded as Scrooge, especially in the average (and larger) size business today. I have yet to meet a man in rank and file with any talent for business leadership, who did not rise to an executive position, and rarely did such a one vindicate the absurd pretensions of workers who clamor for MORE dough for LESS work, whilst producing on machines which stockholders paid for. And those machines, representing thousands of dollars each,—not co-operative effort—are what enable the 'rank and file' to earn the high wages that they grouse about.

"Maybe management does seek to perpetuate itself. Maybe that's not the finest motive. But labor unions strive similarly to perpetuate their hammerlock on those who provided them with the means of earning *more* money (stockholders) and yet lack the initiative and ability to rise on merit alone. Why make so fruitless a distinction. If stockholders withdrew all their money (or the equivalent of it in machines) from enterprise, how could the dependent workers ever earn a livelihood? At least comparable to what they now enjoy?

"You will assert that my premise rests upon pure (or impure) theory. And I shall state that any presumption seeking to evaluate the righteousness of either management or labor, must in all justice take in ALL parts of the picture of production. One must begin with conditions obtaining and developing since the beginning of modern production methods. Jobs once done by hand and now done by machine exist only because the handwork has been so greatly speeded up by mechanical means as to permit a worker to earn far more pay, based on the equally greater production. Would you in the wildest fancy, credit employees with the vision to mechanize a job, or speed up a production process? That's what management does in order to keep on the right side of the ledger . . . and surely one in your consultant position knows that."

File & Forget

Offices—the overhead department—waste an immense amount of time filing useless documents and correspondence. My own office is no exception. I never met a secretary or a file clerk, even one who had special training for the job, who had the faintest notion of what ought to be filed and how to organize it. If you took the time to look through your own files I'll bet you'd realize that sixty percent of the

THIS LECTRODRYER'S BEEN DELIVERING...

C-75 Lectrodryer serving tablet conditioning room at Strong Cobb & Co. in Cleveland

"WINTER WEATHER" dryness ever since 1936

15% relative humidity and an even temperature maintained in the room behind this Lectrodryer assure that tablets produced by Strong Cobb & Company will be uniformly high in quality. The operation is independent of outside weather conditions.

A request for a spare part for this Lectrodryer recently brought the machine to our notice. It's been on the job for thirteen years, performing its DRYing function faithfully and requiring practically no attention.

Lectrodryers are built to give such low-cost, maintenance-free service. Parts are liberally constructed. Designs for different work—whether DRYing air, gas or organic liquid, low or high pressure, a few cubic feet per hour or thousands per minute—take full advantage of Lectrodryer's many years of experience. Alcoa Activated Alumina is the adsorbent; efficient and long lived.

For help in solving your DRYing problems, write Pittsburgh Lectrodryer Corporation, 309 32nd Street, Pittsburgh 30, Pennsylvania.

In England: Birlec, Limited, Tyburn Road, Erdington, Birmingham.
In Australia: Birlec, Limited, 51 Parramatta Road, Glebe, Sidney.

LECTRODRYERS DRY WITH ACTIVATED ALUMINAS

LECTRODRYER

REGISTERED TRADEMARK U.S. PAT. OFF.

stuff in them should never have been filed at all. The rest of the stuff might as well be thrown away because you can seldom find what you want anyway.

My office should be more efficient than most—that's my business—but I must confess it isn't. For a time I tried telling the girls never to make carbon copies of anything unless specifically requested to do so. I then established classifications of material that was important for the guidance of my associates in dictating letters and reports. It didn't work. The girls were so drilled in setting up letters with carbon copies that they did it automatically. Not only did they make the copies; they filed them. That's how letters accepting or rejecting invitations to social affairs get into my files, as I found out recently when I decided to spend a little time browsing through my steadily expanding files. I found old train schedules, old convention programs, circular letters which should have been filed in the waste basket, letters of solicitation from almost every charitable organization in America—and God knows what beside. I went on the warpath and the files were purged to a third of their former size. They'll fill up again, never fear. But whenever I want anything in a hurry it can't be found immediately because it has been misfiled.

During the war I had occasion to work on some confidential stuff for the government and from time to time had some top secret correspondence with several organizations concerning the work. One day I called for some reference material and it couldn't be found. I was panic stricken. I had visions of the FBI descending upon me. Fortunately the documents were eventually found. Since the government communications were stamped "Top Secret," one of my bright young ladies had filed them all under S

Women seem to have a passion for saving useless things. Look through the drawers of your secretary's desk and here's what you'll find: An empty nail polish bottle; 2 broken cigarettes, 20 pencil stubs with broken points, 3 empty lipstick cases, 2 spools nylon thread, different colors, and 1 empty spool—in addition there will be personal letters, hair pins, erasers, scraps of carbon paper, all kinds of memoranda and last but not least, buried in the heap, the important letter she looked all over hell for last week but could not find when you wanted it.

If I had my way there'd be no drawers in office desks at all excepting one small one large enough to hold desk supplies and the minimum of personal necessities. I'd use tables with single drawers only. Several times I have recommended this practical idea to clients but no one ever seems to go for it. They seem to be afraid the girl's legs would be too much exposed. All I can say about that is that a good pair of gams can be very inspiring!

Another idea I've often suggested to clients with no takers—because it is a violation of convention—and this is that the customary 8½ x 11 letterhead should be printed on the long side and typed that way too. That's the way letters are filed and, if printed on the long side, they'd be much easier to locate. They'd be easier to type, too, because the lines of type would be longer and fewer carriage shifts would be involved.

Some firms have hard and fast rules that copies must be made of everything and copies certainly are—reams of them! If letterheads were made up like the fan-fold billing systems with continuous carbons and second sheets, the setting up time would be eliminated and the filing problem simplified because the carbons could be filed in numbered rolls. I've suggested this idea a number of times too with no takers because office people are very conventional and they seem to like a lot of useless work. That's why there are so many of them.

No Man's a Hero to His Valet

Not long ago I decided to apply my engineering experience to the organization of our kitchen. I have often wondered how in God's name women ever find anything, so one day when my wife was away, I decided to take a hand in the culinary department. I worked like hell all day re-arranging things. I couldn't rearrange the heavy equipment in such a short space of time but I did a job on everything that was portable. I have had a lot of experience in laying out cafeteria kitchens and I applied it freely to Mary's kitchen. I was proud of the result. I mentally calculated the fee I would charge a client for a similar job and it came to quite a figure. Mary was getting all this consulting service for nothing. She didn't ask for it of course, but she got it anyway. When she came home, I explained the new layout. I explained all about motion study and work simplification. I told her about kitchen arrangements in factories where hundreds of people are served in a short space of time. I was sure she would be delighted and I waited for her to thank me gratefully. She did.

"I'll thank *you*," said she with somewhat more than normal overemphasis, "to stay the hell out of my kitchen when I'm not home. I want my things where *I* can find them and you can take your old factories and stuff 'em!"

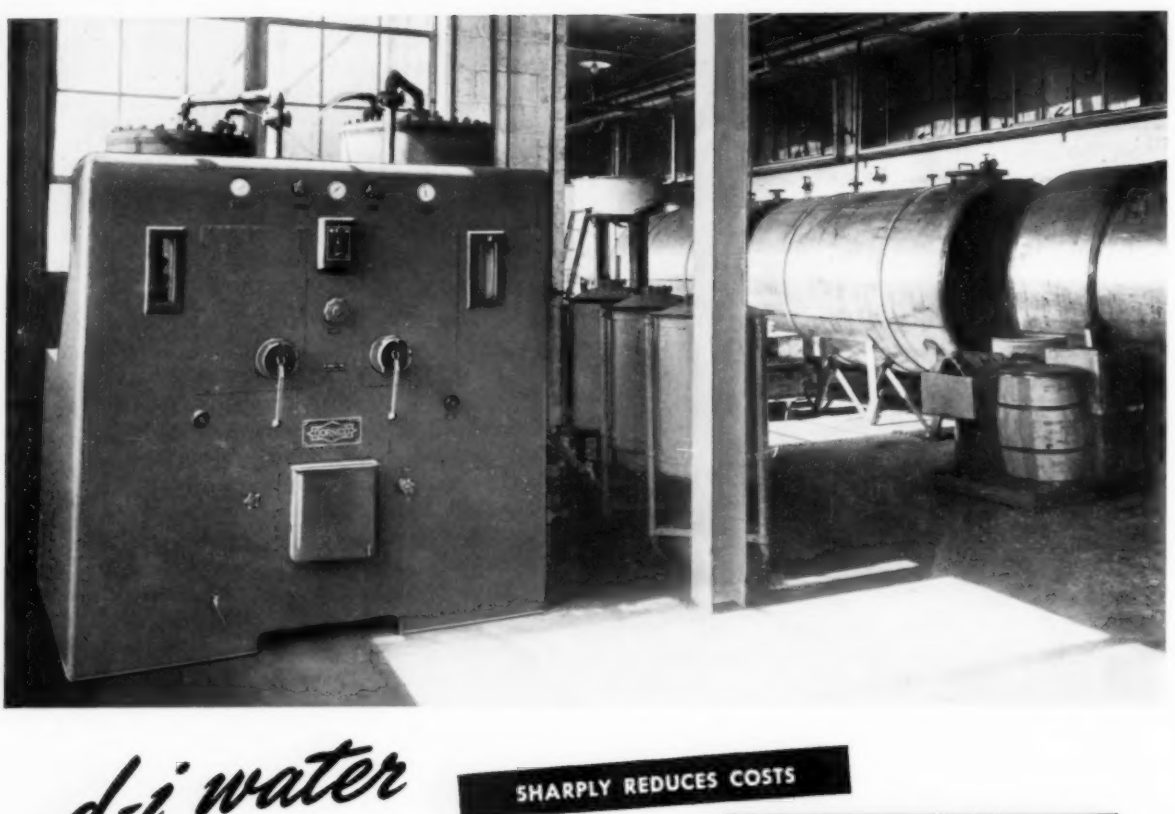
In less time than it takes me to relate it, she pulled off her jacket and went to work rearranging the rearrangement and soon, the three parts of the coffee pot were back at the four points of the compass; the kippers were bundling with the marmalade, the egg beater was bedded down with the pancake turner and all was serene once again.

Little Men

The gauge of men may be quickly taken by their attitude toward what they consider to be *their* ideas. Some men are extremely petty and jealous about getting credit for ideas. They are so concerned about getting credit for suggestions made long ago that they stop thinking about new ideas altogether. When management fails to act upon their suggestions for a long time and then takes action at the suggestion of

A report on the use of Dorrco D-I water in pharmaceutical and cosmetic manufacture.

at LEHN & FINK PRODUCTS *Corporation*



d-i water

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SIMPLIFIES PRODUCT CONTROL

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This is but one case where D-I water is paying off on many counts. Regardless of industry, if your process requires water free of dissolved solids, a package or open-type Dorrco D-I System will produce it . . . in any amount . . . at a fraction of the cost of distillation.

Write for Bulletin #4081 for complete details.

DORRCO

THE DORR COMPANY, ENGINEERS
570 LEXINGTON AVE., NEW YORK 22, N. Y.
ATLANTA • TORONTO • CHICAGO
DENVER • LOS ANGELES
RESEARCH AND TESTING LABORATORIES
WESTPORT, CONN.
SUGAR PROCESSING
PETREE & DORR DIVISION, NEW YORK 22, N. Y.
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Dorr Technical Services and Equipment Are Also Available Through Associated Companies and Representatives in the Principal Cities of the World. Names and Addresses on Request.

RESEARCH — ENGINEERING — EQUIPMENT

DORR

someone else, the second man is regarded by the first as having stolen the ideas even though he may not have known anything about the previous suggestions. I run into this situation all the time in consulting work. It is inevitable that every consultant will make suggestions that have been made before and management will act upon them simply because they recognize extensive experience and they realize that the consultant is looking at the whole plant picture into which the suggestion previously made may dovetail. In my own case I always make a point of telling management at the start that many of the suggestions I shall make have undoubtedly already been made and, that in any case, the success of any work I do depends upon the intelligence and cooperation of the group with which I am working. I have noticed in organizations with a high coefficient of intelligence that really big men don't give a damn who gets credit for ideas so long as something is done about them. It is noteworthy in such organizations that when intelligent cooperative men work together new ideas are generated continually because such men stimulate each other. Actually no idea is really novel entirely. If it is analyzed carefully the elements of which it is composed are readily discernible. A new idea is merely a crystallization in a new form of experience and observation and thinking. And if one is mentally honest one will admit the experience isn't all one's own.

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high Navy standards encouraged Lectrodryer executives to adopt the machine to commercial and industrial uses.

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Lectrodryer Corp. will furnish information regarding the new model to those addressing Dept. EG., Pittsburgh Lectrodryer Corp., P. O. Box 1766, Pittsburgh 30, Pa.

Proctective Packaging Medium

No matter what you make, if it can be damaged in transit, this new protective packaging medium, created by Pulp Reproduction Co., Milwaukee, Wis., offers a practical solution, according to the manufacturer.

It is made of molded wood-pulp, by an organization that has pioneered the field. It was used successfully during the war for packaging intricate aircraft parts sent all over the world. Its utility is not limited by size or shape. Your product can be as small as a water glass or as large as a soda fountain . . . it can be round, square, oval, rectangular or a combination of all four and it will give it damage protection equal to a suit of armor.

For square and rectangular items, standard corner pieces provide the necessary protection. (See illustration). You merely place the shock-cushions into the four corners of the crate or carton, set the unit onto the cushions, place an additional four around the top corners of the product, before securing the top, and you've got a package that is ready for the roughest of handling.

On quantity items, it is especially molded to fit shapes other than square or rectangular. (See illustration). This reduces the task of actual packaging to an extremely fast and simple operation. All that's required is to fit the tailor-made units around the product, crate it and it's ready to go without danger of damage.

Pulp Reproduction Co., Milwaukee, Wis. will gladly supply specific information on how this new protective packaging medium can be economically applied to solve difficult packaging problems.

"Roto-Pak"

The "Roto-Pak" is the newest machine to be introduced for the Fully Automatic making of a package, filling and sealing it at high speeds. The machine is designed to produce an attractive, extremely low unit cost merchandising package for the user's product.

The package can be made from any material which has a heat seal coating. The package offers attractiveness which will create impulse buying, give brand identification to the packer's product, and at the same time protect the product. Standard packaging films such as cellophane—pliofilm—poletheleyne and foil laminate in either over-all printed, plain or registered printed form can be used.

The "Roto-Pak" machine automatically forms the package from two rolls of material; fills, seals and delivers these filled packages at an exceptionally high rate of production. The machine feeds the product from a hopper to a set of precision machined measuring cups, which deposit the accurately measured loads through a forming tube into the packet. Feeding can also be accomplished by hand for certain irregular shaped objects.

The unit is manufactured so that it is readily adjustable, and has a certain amount of flexibility within a given range. The standard machine is able to make, fill and seal a package from a size 1″ x 1″ square up to a package 6″ in over-all width, and 6″, and longer if desired, in length.

All four edges of the "Roto-Pak" package are firmly sealed. The principle of the machine brings two rolls of film face to face, and seals them by means of heat and compression. This simplicity of method gives the "Roto-Pak" package an extremely low unit cost. Each individual package offers a high degree of air and moisture protection, insuring freshness and flavor with the appearance of the product being retained.

The machine is extremely compact, it occupies a floor space of but 2-½ x 2-½ square feet, and is approximately 7 feet high. The entire unit is operated on a ½ or ¾ H.P. motor, depending upon the type feed head utilized. The unit is constructed with a minimum of operating parts, to very close tolerances, and is easily operated.

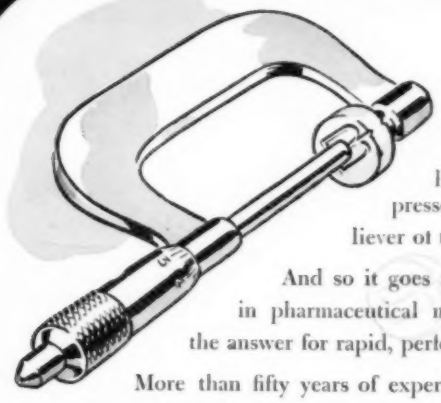
The unit is a natural for handling either the sample requirements of certain large packers, or the automatic packaging of various free flowing crystalline or granular structure products in small amounts. Just a few items that lend themselves to the "Roto-Pak" are candies, peanuts, tea, tablets, dry noodle soup mixes, etc. Write Triangle Package Machinery Co., 6633 West Diversey Avenue, Chicago 35.

Water Sterilized Electronically

One of the pharmaceutical industry's most vexing problems—obtaining sterile water for product washing

ASK STOKES

For Rapid, Perfect Production...



... leaders in the industry call on Stokes machines. For example, note the installation of Stokes tablet presses in the modern plant of Bristol-Myers. These high-speed presses produce Bufferin, the newest pain reliever of this famous company.

And so it goes all over the world . . . for any problem in pharmaceutical manufacturing, Stokes machines provide the answer for rapid, perfect production.

More than fifty years of experience enables us to help you in developing or improving formulas, extracting and concentrating pharmaceuticals and chemicals, preserving biologicals, tablet-making, and many other related operations. Consultation is invited.

Stokes makes Tablet Machines, Pharmaceutical equipment, Tube Fillers, Vacuum and Special Processing equipment, Vacuum Pumps and Gages, Plastics Molding Presses, Water Stills, and Special Machinery.

F. J. Stokes Machine Company, 5932 Tabor Road, Philadelphia 20, Pa.

STOKES KNOWS HOW

Millions use WILDROOT... *and* Wildroot uses PNEUMATIC

Wildroot uses Pneumatic equipment for the same reasons given by so many other leading concerns in its field. Pneumatic machines operate smoothly and keep bottling costs under control. They do the whole job of cleaning, filling, capping and labeling with utmost dependability and dispatch. Designed from the ground up to perform at "lower cost per container" Pneumatic bottling and packaging machines are a money saving investment. They represent the most advanced methods of automatic operation — and are the accepted solution for eliminating costly obsolescence in your plant. PNEUMATIC SCALE CORPORATION, LTD., 70 Newport Avenue, Quincy 71, Massachusetts. Branch Offices in New York, New York; Chicago, Illinois; San Francisco and Los Angeles, California; Seattle, Washington.

Mr. Harry J. Lehman, President, Wildroot Company, Inc. of Buffalo, New York says:

"Pneumatic Scale Machinery has played an important part in the manufacture of Wildroot Products since February, 1925. The reliability and efficiency of their machines has been proven through actual performance in our plant these twenty-four years. Because this reliability and outstanding efficiency is so tremendously important with today's higher costs of operation, our bottle filling and labeling equipment is now 100% Pneumatic. This, with Pneumatic's excellent service policy, results in production that is hard to beat."

PNEUMATIC PACKAGING AND BOTTLING MACHINERY

and bottle rinsing—has been solved through the magic of electronics.

A compact unit developed by the Aquafine Company, 2137 East Olympic Blvd., Los Angeles uses Westinghouse electronic tubes to sterilize 1500 to 2000 gallons of water an hour at a cost of two or three cents. Water is instantaneously sterilized by ultra-violet as it flows through the unit, eliminating need for storage tanks and danger of recontamination. Where absolute sterility is not required, more than 5000 gallons of water an hour can be delivered to the point of use, with bacteria reduction in excess of 94 percent. Tested by two leading research laboratories, the electronic method of water sterilization has been proved equally effective against all types of bacteria.

Water sterilized by this amazing new process is unchanged in taste, color, odor, or chemical structure. It is therefore suitable for drug preparation, equipment and instrument cleaning.

In the past, many pharmaceutical processors have had to forego the use of sterile water, with consequent high spoilage losses, due to the prohibitive cost of obtaining even the relatively small quantity of 5000 gallons a day. Initial cost of 1000-gallon stainless steel tank for heating and 5000-gallon stainless steel cooling tank was frequently too high to justify installation. Cost of heating and cooling water in these quantities was high, and danger of recontamination was great.

It is claimed that the new electronic unit actually sterilizes water for less than the cost of pumping.

Stokes Freeze Dryer

F. J. Stokes' New Freeze Dryer is efficient, compact, flexible. Designed for research and development technicians in hospitals, universities and industry is this new Stokes Model 2004-L, a self-contained freeze dryer with 12 square feet of shelf area. It combines the efficiency of large scale units with the flexibility and compactness of small laboratory models. Any type of product, in bulk or in containers, can be handled easily and with minimum of operator attention.

New design features permit the use of one compressor for both prefreezing and condensation instead of the usual two compressors, thus simplifying installation, operation and servicing. Neither dry ice nor desiccant is required.

The equipment consists of a welded steel vacuum shelf dryer with two dryer shelves; a motor driven pump to circulate electrically heated, thermostatically controlled, hot water; Freon compressor; high vacuum pump with centrifugal oil clarifier; vacuum piping and valves; complete insulation; vacuum gage; controls and instruments.

Specifications and Capacities of Stokes Freeze Dryer 2004-L are:

Capacity, per day (500-10cc containers)	**5 litres**
" 2-day cycle (32-300cc tontainers)	**10 litres**
Drying Shelf Area	**12 sq. ft.**
Shelf Clearance	**3½ inches**
Electrical Requirements	**7½ KW**
Height	**5′ 0″**
Working Area Required	**30 sq. ft.**
Weight	**1,850 lbs.**
Cu. Ft. boxed for Export	**100**

For further details, write F. J. Stokes Machine Company, Tabor Road, Philadelphia 20, Pa.

Drumobile

Eliminating manual exertion entirely from the handling of drums and barrels, an improved three-wheeled carrier is asserted to have likewise eliminated worker injuries such as backstrain, hernia, burns, crushed hands and feet.

The wheel-about implement, tradenamed Drumobile, and manufactured by Ernst Drumobile Division, Brantwood Products, Inc., Buffalo, N. Y., is specifically designed to lift, transport and release any size or type of steel drum, wood barrel or cylindrical fibre container. Model 800 Series now available is designed for loads up to 850 pounds in 50 to 60 gal. sizes. Announcement of its availability in production quantity for the first time is expected to be of particular interest to all producers, handlers and users of drum-packed materials. Concerns now using the prototype custom-assembled model are said to have effected not only an improved safety record but decreased labor and maintenance costs.

Drumobile is declared to possess many advantages in addition to safe and speedy handling. Unique among carrying vehicles, it picks up the container, carries it in a level, upright position and deposits it gently without being touched by human hands and without tilting. Thus, open containers may be carried without risk of spilling, even when brim full. This anti-spill feature has been found a most valuable asset, it is reported, in chemical plants where excessively hot liquids are carried from one area to another.

In maneuverability too, the Ernst vehicle is said to have advantages intrinsic in its unique design. Scarcely wider than the drum itself, the Drumobile can be operated in close quarters where conventional carriers would generally be restricted. The lever-handle, after serving its function in lifting the load and actuating the safety lock, becomes a vertically free-swinging steering column adapting itself to any desired height. Its fulcrum is so located as to provide tremendous mechanical advantage at the end of its 17½ inch length. The same leverage principle is employed on the welded chassis which is equipped with a choice of three accessory gripping devices for steel drums, wood barrels or rimless fibre containers. Literature furnished by the manufacturer, Ernst Drumobile Division, Brantwood Products, Inc., 115 Brayton St., Buffalo 13, N. Y.

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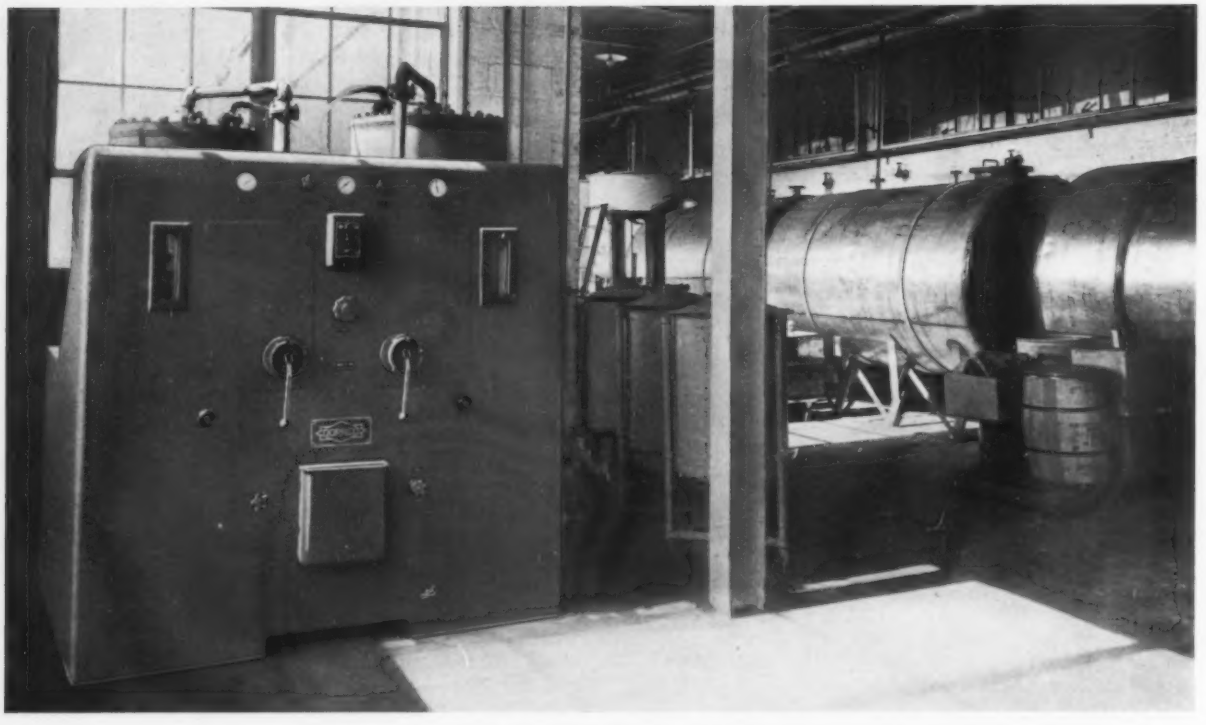
LEHN & FINK PRODUCTS *Corporation*



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Proctective Packaging Medium

No matter what you make, if it can be damaged in transit, this new protective packaging medium, created by Pulp Reproduction Co., Milwaukee, Wis., offers a practical solution, according to the manufacturer.

It is made of molded wood-pulp, by an organization that has pioneered the field. It was used successfully during the war for packaging intricate aircraft parts sent all over the world. Its utility is not limited by size or shape. Your product can be as small as a water glass or as large as a soda fountain . . . it can be round, square, oval, rectangular or a combination of all four and it will give it damage protection equal to a suit of armor.

For square and rectangular items, standard corner pieces provide the necessary protection. (See illustration). You merely place the shock-cushions into the four corners of the crate or carton, set the unit onto the cushions, place an additional four around the top corners of the product, before securing the top, and you've got a package that is ready for the roughest of handling.

On quantity items, it is especially molded to fit shapes other than square or rectangular. (See illustration). This reduces the task of actual packaging to an extremely fast and simple operation. All that's required is to fit the tailor-made units around the product, crate it and it's ready to go without danger of damage.

Pulp Reproduction Co., Milwaukee, Wis. will gladly supply specific information on how this new protective packaging medium can be economically applied to solve difficult packaging problems.

"Roto-Pak"

The "Roto-Pak" is the newest machine to be introduced for the Fully Automatic making of a package, filling and sealing it at high speeds. The machine is designed to produce an attractive, extremely low unit cost merchandising package for the user's product.

The package can be made from any material which has a heat seal coating. The package offers attractiveness which will create impulse buying, give brand identification to the packer's product, and at the same time protect the product. Standard packaging films such as cellophane—pliofilm—poletheleyne and foil laminate in either over-all printed, plain or registered printed form can be used.

The "Roto-Pak" machine automatically forms the package from two rolls of material; fills, seals and delivers these filled packages at an exceptionally high rate of production. The machine feeds the product from a hopper to a set of precision machined measuring cups, which deposit the accurately measured loads through a forming tube into the packet. Feeding can also be accomplished by hand for certain irregular shaped objects.

The unit is manufactured so that it is readily adjustable, and has a certain amount of flexibility within a given range. The standard machine is able to make, fill and seal a package from a size 1″ x 1″ square up to a package 6″ in over-all width, and 6″, and longer if desired, in length.

All four edges of the "Roto-Pak" package are firmly sealed. The principle of the machine brings two rolls of film face to face, and seals them by means of heat and compression. This simplicity of method gives the "Roto-Pak" package an extremely low unit cost. Each individual package offers a high degree of air and moisture protection, insuring freshness and flavor with the appearance of the product being retained.

The machine is extremely compact, it occupies a floor space of but 2-½ x 2-½ square feet, and is approximately 7 feet high. The entire unit is operated on a ½ or ¾ H.P. motor, depending upon the type feed head utilized. The unit is constructed with a minimum of operating parts, to very close tolerances, and is easily operated.

The unit is a natural for handling either the sample requirements of certain large packers, or the automatic packaging of various free flowing crystalline or granular structure products in small amounts. Just a few items that lend themselves to the "Roto-Pak" are candies, peanuts, tea, tablets, dry noodle soup mixes, etc. Write Triangle Package Machinery Co., 6633 West Diversey Avenue, Chicago 35.

Water Sterilized Electronically

One of the pharmaceutical industry's most vexing problems—obtaining sterile water for product washing

and bottle rinsing—has been solved through the magic of electronics.

A compact unit developed by the Aquafine Company, 2437 East Olympic Blvd., Los Angeles uses Westinghouse electronic tubes to sterilize 1500 to 2000 gallons of water an hour at a cost of two or three cents. Water is instantaneously sterilized by ultra-violet as it flows through the unit, eliminating need for storage tanks and danger of recontamination. Where absolute sterility is not required, more than 5000 gallons of water an hour can be delivered to the point of use, with bacteria reduction in excess of 94 percent. Tested by two leading research laboratories, the electronic method of water sterilization has been proved equally effective against all types of bacteria.

Water sterilized by this amazing new process is unchanged in taste, color, odor, or chemical structure. It is therefore suitable for drug preparation, equipment and instrument cleaning.

In the past, many pharmaceutical processors have had to forego the use of sterile water, with consequent high spoilage losses, due to the prohibitive cost of obtaining even the relatively small quantity of 5000 gallons a day. Initial cost of 1000-gallon stainless steel tank for heating and 5000-gallon stainless steel cooling tank was frequently too high to justify installation. Cost of heating and cooling water in these quantities was high, and danger of recontamination was great.

It is claimed that the new electronic unit actually sterilizes water for less than the cost of pumping.

Stokes Freeze Dryer

F. J. Stokes' New Freeze Dryer is efficient, compact, flexible. Designed for research and development technicians in hospitals, universities and industry is this new Stokes Model 2004-L, a self-contained freeze dryer with 12 square feet of shelf area. It combines the efficiency of large scale units with the flexibility and compactness of small laboratory models. Any type of product, in bulk or in containers, can be handled easily and with minimum of operator attention.

New design features permit the use of one compressor for both prefreezing and condensation instead of the usual two compressors, thus simplifying installation, operation and servicing. Neither dry ice nor desiccant is required.

The equipment consists of a welded steel vacuum shelf dryer with two dryer shelves; a motor driven pump to circulate electrically heated, thermostatically controlled, hot water; Freon compressor; high vacuum pump with centrifugal oil clarifier; vacuum piping and valves; complete insulation; vacuum gage; controls and instruments.

Specifications and Capacities of Stokes Freeze Dryer 2004-L are:

Capacity, per day (500-10cc containers)	**5 litres**
" 2-day cycle (32-300cc tontainers)	**10 litres**
Drying Shelf Area	**12 sq. ft.**
Shelf Clearance	**3½ inches**
Electrical Requirements	**7½ KW**
Height	**5′ 0″**
Working Area Required	**30 sq. ft.**
Weight	**1,850 lbs.**
Cu. Ft. boxed for Export	**100**

For further details, write F. J. Stokes Machine Company, Tabor Road, Philadelphia 20, Pa.

Drumobile

Eliminating manual exertion entirely from the handling of drums and barrels, an improved three-wheeled carrier is asserted to have likewise eliminated worker injuries such as backstrain, hernia, burns, crushed hands and feet.

The wheel-about implement, tradenamed Drumobile, and manufactured by Ernst Drumobile Division, Brantwood Products, Inc., Buffalo, N. Y., is specifically designed to lift, transport and release any size or type of steel drum, wood barrel or cylindrical fibre container. Model 800 Series now available is designed for loads up to 850 pounds in 50 to 60 gal. sizes. Announcement of its availability in production quantity for the first time is expected to be of particular interest to all producers, handlers and users of drum-packed materials. Concerns now using the prototype custom-assembled model are said to have effected not only an improved safety record but decreased labor and maintenance costs.

Drumobile is declared to possess many advantages in addition to safe and speedy handling. Unique among carrying vehicles, it picks up the container, carries it in a level, upright position and deposits it gently without being touched by human hands and without tilting. Thus, open containers may be carried without risk of spilling, even when brim full. This anti-spill feature has been found a most valuable asset, it is reported, in chemical plants where excessively hot liquids are carried from one area to another.

In maneuverability too, the Ernst vehicle is said to have advantages intrinsic in its unique design. Scarcely wider than the drum itself, the Drumobile can be operated in close quarters where conventional carriers would generally be restricted. The lever-handle, after serving its function in lifting the load and actuating the safety lock, becomes a vertically free-swinging steering column adapting itself to any desired height. Its fulcrum is so located as to provide tremendous mechanical advantage at the end of its 17½ inch length. The same leverage principle is employed on the welded chassis which is equipped with a choice of three accessory gripping devices for steel drums, wood barrels or rimless fibre containers. Literature furnished by the manufacturer, Ernst Drumobile Division, Brantwood Products, Inc., 115 Brayton St., Buffalo 13, N. Y.

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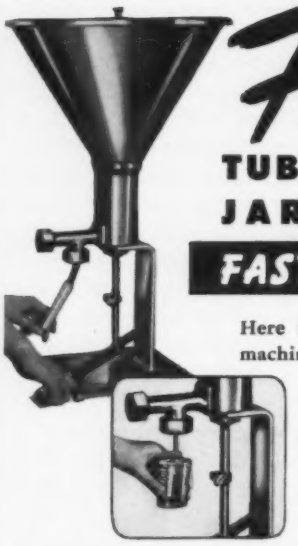

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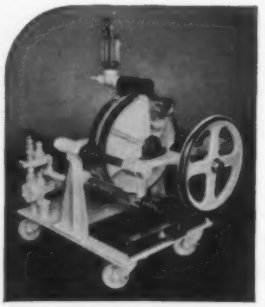

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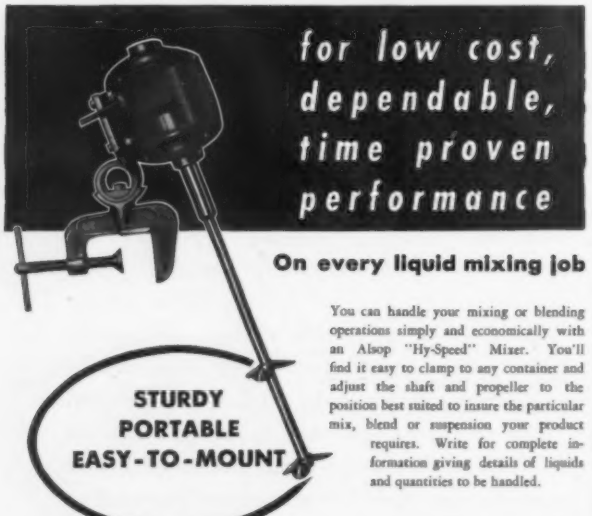

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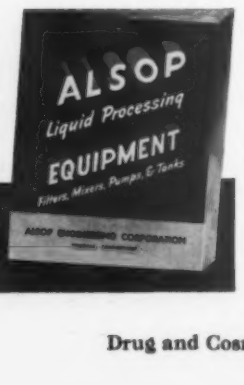

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Mandelic Acid

(Continued from page 35)

investigators. The daily dosage for various age groups as given in the *British Pharmaceutical Codex*[1] is as follows:

Adults	**12 gm.**
Children: Up to 6 mos	**2 gm.**
6 mos.-2 yrs	**2-4 gm.**
2-5 yrs	**4-6 gm.**
5-12 yrs	**6-8 gm.**

Administration of the drug for 6 to 12 days should be sufficient to eradicate the infection if it is amenable to this treatment. If the urine is not sterile at the end of this period, it is usually advisable to discontinue the drug and give a second course 10 to 14 days later.[36] This lessens the possiblity of renal irritation and the development of resistance by the organism.[11] Hyman[28] considers it good practice to alternate the periods of mandelic acid therapy with a few days' administration of sodium bicarbonate.

Where mandelic acid is given in the form of one of its salts, the daily dosage should be equivalent to 12 gm. of the acid. In the case of the calcium and ammonium salts, this equivalent is 14 gm. The following section describes a number of forms in which the drug has been administered by clinical investigators.

Acidification of the Urine

The dosage and the degree of acidity of the urine are related. As the urine becomes less acid, the concentration of mandelic acid required to exert a bactericidal effect is increased. A pH of 5.3-5.5 and an acid concentration of 0.5-1.0 per cent represent a favorable adjustment of these two factors. If the mandelic acid alone fails to reduce the pH of the urine sufficiently, concurrent administration of an acidifying agent is indicated. Ammonium chloride is most frequently used, but the acid phosphate or nitrate have also been employed. Other acidifying agents which have been proposed for this purpose include hydrochloric acid, nitrohydrochloric acid or sodium acid phosphate. The ketogenic diet has also been employed for the same purpose.[38] Certain salts of mandelic acid, such as the ammonium and calcium salts, are often capable of producing a sufficient degree of acidosis without the use of an additional acidifying agent. Alkaline substances such as sodium bicarbonate or milk of magnesia should be avoided during mandelate therapy. Fluid intake should be restricted to a quantity not exceeding 1200 cc. daily. The pH of the urine should be determined twice daily to insure the maintenance of the proper level, namely 5.5 or less.

Pharmaceutical Application

Mandelic acid itself cannot be administered because of its irritating effect on mucous membranes. It is therefore used chiefly as the ammonium, calcium, or

sodium salt in the form of tablets, syrups or elixirs. Intravenous administration has also been reported.[5]

Ammonium Mandelate exists in the form of a white, very hygroscopic, crystalline powder. It is very soluble in water and sparingly soluble in alcohol. On account of its hygroscopicity it is more commonly administered in the form of an elixir or syrup than as tablets. The ammonium component is metabolized and the residual mandelic acid fraction acidifies the urine, usually eliminating the need for an acidifying agent.

These preparations are usually made from mandelic acid by neutralization with ammonium hydroxide or ammonium carbonate. A syrup of ammonium mandelate is described in *New Nonofficial Remedies* 1946. Knight[39] and Woodward[40] also published formulas for syrups. Fantus and Sisson[20] proposed the following formula:

Ammonium chloride	**50 gm.**
Ammonium carbonate	**80 gm.**
Mandelic acid	**200 gm.**
Sucrose	**400 gm.**
Soluble saccharin	**1 gm.**
Benzaldehyde	**0.04 cc.**
Oil of fennel	**0.1 cc.**
Anethol	**1 cc.**
Fluid ext. of glycyrrhiza	**175 cc.**
Water ..... to	**1,000 cc.**

In a capacious vessel, mix the mandelic acid and ammonium carbonate with 400 cc. of warm distilled water; let stand until effervescence ceases. Dissolve the ammonium chloride, saccharin and sucrose in this solution by agitation. Add the fluid extract in which the oils have been dissolved and finally a sufficient quantity of distilled water to make 1,000 cc. The average dose of 15 cc. represents 3 grams of mandelic acid and in addition 0.75 grams of ammonium chloride.

Rosen[41] also has proposed a formula for a syrup of ammonium mandelate:

Mandelic acid	**400 gm.**
Stronger ammonia water	**180 cc.**
Ammoniated glycyrrhizin	**50 gm.**
Distilled water	**100 cc.**
Saccharin	**5.0 gm.**
Anethol	**0.5 cc.**
Syrup of althea ..... to	**1,000 cc.**

Dissolve the mandelic acid in the stronger ammonia water in a beaker, let stand until cool, and if necessary, adjust to a neutral condition by heating on a water bath. Dissolve the saccharin and ammoniated glycyrrhizin in the distilled water and add this to the ammonium mandelate solution. Add the anethol and finally a sufficient quantity of syrup of althea.

Calcium Mandelate occurs as a white, odorless powder. It is slightly soluble in cold water and insoluble in alcohol. One gram dissolves in about 80 cc. of boiling water. The salt is practically tasteless and non-hygroscopic and is therefore suited for administration in the form of compressed tablets, which are prepared by usual methods. Granules have been proposed

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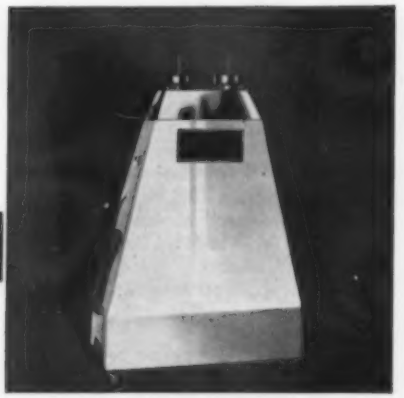

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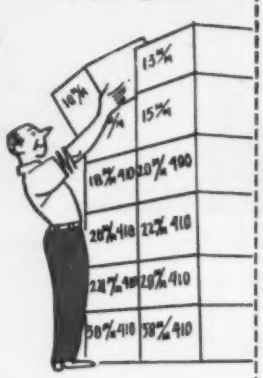

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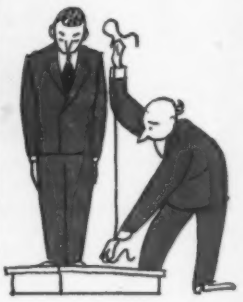

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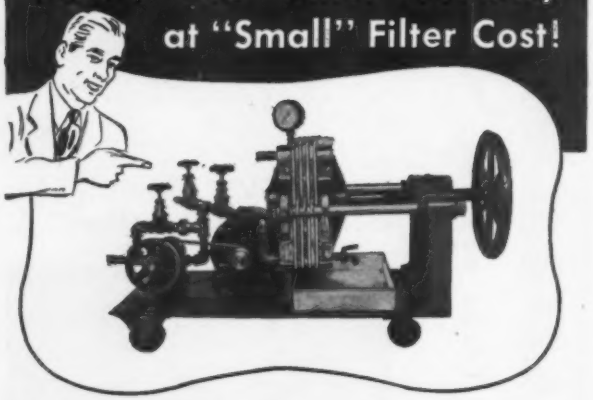

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containing calcium mandelate of 50 parts, cocoa 5 parts and sucrose 20 parts;[40] and calcium mandelate 75 parts, soluble casein 25 parts, soluble saccharin 0.2 parts, and vanillin 0.1 part.[49] Calcium mandelate is decomposed in the stomach with the liberation of free mandelic acid which usually acidifies the urine sufficiently without supplementary acid administration.

Sodium Mandelate occurs as white crystals having a slight aromatic odor, soluble in about 1.1 parts of water and in 60 parts of alcohol. It has the disadvantage of requiring simultaneous administration of an acidifying drug.

Other Salts: The ethanolamine, methenamine, and ethylenediamine salts of mandelic acid have also been used.

The technics of administration which were used by various clinical investigators may serve as interesting examples of the pharmaceutical compounding of these products.

Rosenheim[42] used the following procedure:

One fluid ounce of a mixture containing 3 gm. mandelic acid, just neutralized with sodium bicarbonate (1.6 gm.) and flavored with lemon is given 4 times a day. Four cachets of ammonium chloride, containing 1 gm. each, are given during the day. The number may be increased up to 8 if necessary to acidify the urine sufficiently. The fluid intake is limited to 2 pints.

Holling and Platt[27] employed the following prescriptions:

Sodium mandelate	**50 grains**
Syrup of orange	**1 drachm**
Water ... to	**1 ounce**

This constituted one dose, to be given in water 4 times daily, preceded each time by:

Ammonium chloride	**30 grains**
Liquid ext. licorice	**15 minims**
Water ... to	**1 ounce**

or

One or two 1-grain capsules of ammonium chloride.

Fluid intake was restricted to 2 pints except in the presence of thirst, when more fluid was allowed.

Lyon and Dunlop[31] used the following dose in water 4 times a day:

Mandelic acid	**45 grains**
Sodium bicarbonate	**21 grains**
Syrup of orange	**3 drachms**
Water ... to	**1 ounce**

Ammonium chloride was given daily in 10-grain cachets, six of which were usually sufficient to give the desired acidity, although larger doses were sometimes necessary. The fluid intake was limited to 2 or 3 pints daily.

Cook and Buchtel[12] gave one ounce of a 10 per cent solution of sodium mandelate (equiv. to 50 grains of mandelic acid) before each meal and at bedtime, with ammonium chloride or nitrate in the usual dose to acidify the urine. Intake of fluid was restricted to 1,200 cc. daily.

The prescription used by Payne and Signy[39] and also Sheldon[47] contains 1.5 grams of mandelic acid per fluid drachm:

Ammonium mandelate	**26 grains**
Liquid ext. of licorice	**5 minims**
Elixir of gluside	**1/5 minims**
Water ... to	**1 drachm**

Auxiliary acidifying agent (if necessary):

Ammonium phosphate	**7½ grains**
Liquid ext. of licorice	**5 minims**
Acid syrup	**15 minims**
Water ... to	**1 drachm**

Schnohr[45] used a powder containing calcium mandelate:

Calcium mandelate	**72.25**
Cocoa powder	**7.50**
Sucrose	**20.00**
Saccharin soluble	**0.02**

Massey[32] proposed the following syrup to be given with 8 to 16 half-gram enteric coated ammonium chloride tablets daily:

Mandelic acid	**48 gm.**
Sodium bicarbonate	**25.6 gm.**
Lemon syrup	**90 cc.**
Water ... to	**480 cc.**

Carroll and Coleman[5] gave intravenously 25 cc. of a 20 per cent solution of the sodium salt adjusted to a pH of 7.2. The injections were well tolerated. Satisfactory concentrations were established by this route for 8 hours after a single injection.

Excretion

Schotten[46] in 1883 and Knoop[30] in 1905 showed mandelic acid to be excreted in the urine unaltered and almost quantitatively following oral administration to dogs. Rosenheim[42] obtained nearly 2 gm. of the unaltered acid by ether extraction of the acidified urine after oral administration of 5 gm. to dogs.

Likewise in humans, mandelic acid undergoes no metabolic changes in the body and is excreted almost quantitatively in the urine. Rosenheim[42] studied the excretion of mandelic acid after oral administration in three of his series of 12 patients. The drug was administered in amounts of 12 gm. daily in divided doses. The results were as follows:

Case No.	*Vol. Urine (cc.)*	*Mandelic Acid Excreted (gm.)*	*Conc. in Urine (gm./100 cc.)*
7	1st day — 500	2	0.4
	2nd day—1210	6.8	0.56
	3rd day — 980	3	0.3
9	1st day — 640	4	0.62
	2nd day—1030	7.5	0.73
	3rd day — 900	5	0.55

Helmholz and Osterberg[26] determined the concentrations indicated following a single dose of 5 gm.:

Hours After Dose	*Vol. Urine*	*Mandelic Acid (gm./100 cc.)*
2	240 cc.	0.38
6	240	0.60
10	155	0.61
24	500	0.21

McMahon[33] and also Carroll and Coleman[5] injected intravenously into dogs, 20 per cent solutions of sodium

(Continued on page 90)

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Patent Thoughts and Trends

By THOMAS CIFELLI, Jr., Patent Attorney

Patent Lawyers Consider The U. S. Patent System—And Disagree

As already indicated from time to time in these columns, the question of what constitutes "patentable invention" is as basic to the patent law and patent lawyer as are atoms, ions, electrical charges, etc. to the chemist and physicist, to mention only two groups who deal with such phenomena. Just as the chemist or physicist daily in the course of his professional pursuits makes calculations or draws inferences based on considerations involving atoms, ions, electric charges, etc. so does just about every problem in patents involve a consideration of this quality called "invention." However, even though the chemist or physicist probably never will see an atom, ion or electric charge, the calculations and inferences drawn by these scientists possess in many cases a high degree of accuracy. Thus, an analytical chemist can determine the exact percentage of carbon in steel, chlorine in water, etc., and the physicist can accurately determine the current flowing through an electrical system, etc. So it would seem natural to suppose that the patent attorney, given all the facts surrounding an alleged invention, would be able to determine or predict with considerable accuracy whether the basic elements of "invention" were present.

But such is far from the case, as anyone who has had even the most casual association with patents can testify.

There are some who might conclude from this recitation that they knew right along that patent attorneys did not know what they were doing. A great majority, however, will realize how lucky they are not to be patent attorneys or agents. For, while the chemist or physicist or cosmetician deals with measurable quantities, such as centimeters, grams and seconds, the patent worker deals with an as-yet undefinable factor which at times seems to mean all things to all men. Furthermore, in the manipulations and considerations of the chemist or physicist he can set up his chemical or physical system in such a way as to eliminate interfering materials or forces and thereby obtain reproducible results within the experimental margins of error. What of the patent attorney? Let us take a look at a case which is not hypothetical, but actually happened.

Many years ago Marconi developed the four turned circuit wireless system. His was the first successful one although the underlying theoretical considerations had been pointed out by others. The work seemed to possess the elements of patentability and patents were in fact obtained in various countries including the United States, Britain and France. In spite of the world-wide recognition given to the inventor, the U. S. Supreme Court more than forty years after the invention was made declared that Marconi's work was not deemed worthy of patentable protection because *there was no invention involved.* It would be interesting to know how many chemists or physicists would have agreed with the patent attorney and the public *at the time the invention was made* that Marconi was entitled to patent protection. For that matter it would be interesting to know how many would have disagreed with the U. S. Supreme Court when it rendered its decision. But that is another matter.

The patent attorney, unlike the chemist or physicist could not recreate and isolate the patent "system" pertaining at the time Marconi made his invention. Thus, even though the rule is that the question of invention is to be measured as of the time the invention was made and not as of the time the Court passes on it, that rule was applied by judges in an advanced radio and television era, judges who might be pardoned at being unable to see invention in the crude Marconi device of forty years earlier—a device which almost any high school child now can reproduce and understand.

Perhaps it was because of musings such as these that one of the eminent members of the patent bar in this country, Drury W. Cooper, felt impelled to write very strongly on the subject in the April 1949 issue of The American Bar Association Journal. In this article Mr. Cooper challenged the courts' view of "invention." Essentially, Mr. Cooper's position is that the courts should not read into the patent statutes the requirement that an "invention" should be present. If novelty and utility (and certain other statutory requirements) are present Mr. Cooper feels that the courts should sustain the patent. This would leave as the only indefinite condition of a patent suit the question of infringement, and in Mr. Cooper's words:

"One trying to make up his mind about an outstanding patent would be uncertain only on the question of infringement, and that, by accepted principles, would be governed by the degree of advance shown by the patent, so that if the inherent novelty were but trifling, a defendant could easily, as now and heretofore, avoid it. If, on the contrary, the step forward were a long one, a corresponding breadth of construction would be given the patent and infringers would beware correspondingly."

Mr. Cooper points out one of the curiosities in the legal development of patents and copyrights. Both have their legal source in the same provision of the Constitution, Article I, Sec. 8, Clause 8, which reads as follows:

"The Congress shall have power . . . to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries."

Yet, in spite of the common Constitutional foundation for both copyrights and patents, the copyright has been accorded great liberality while the patent right has been progressively limited. An indication of the liberality of both statutes and courts to copyrights is given by the fact that copyrights "include books that the old guild of

authors would have sustained, catalogues, mathematical tables, statistics, designs, guide books, directories, and other works of similar character."

In conclusion, Mr. Cooper suggested that a Federal Statute should be passed to eliminate the power of courts to declare patents invalid on grounds other than those of novelty and utility.

Patent lawyers, even though many of them consider themselves quite distinct from other lawyers, like an argument. Consequently, it was not long before Mr. Cooper's views were challenged by another prominent patent lawyer, W. Houston Kenyon, Jr., also of New York City. Mr. Kenyon feels that Mr. Cooper's remedy would be worse than the ills. He points out that the so-called mistake of the courts in reading "invention" into the requirements of a valid patent was made as long ago as 1850 and Mr. Kenyon says that it is somewhat difficult to understand why the patent slaughter (by the courts declaring so many patents invalid) did not begin until around 1932 and 1933. As a matter of fact, Mr. Kenyon cites some figures which according to him show that in the decade from 1935 to 1945, which is generally considered by patent lawyers to be a black decade as far as the fate of patents in the hands of the Supreme Court is concerned, actually was more favorable to patents than were the so-called good old days of the nineties.

Another point which Mr. Kenyon mentions to show that science is still flourishing, even though the so-called mistake was made way back in 1850, is that the number of patent applications being filed nowadays in the Patent Office indicates an unprecedented inventive output. Because of this and because of the war conditions there is a tremendous backlog of applications awaiting action and Mr. Kenyon believes that it would help the patent system to improve the examination facilities of the U. S. Patent Office, so that the few patents which cause most of the trouble would not issue. Mr. Kenyon notes the accepted fact that most patents are never litigated for two main reasons. Probably the most important one according to Mr. Kenyon is the fact that most patents are granted on ideas originally good but which die aborning. The second reason is that a large group of patents go into widespread use and are generally respected, earning royalties for their owners and never getting into court during their allotted span of seventeen years. In other words, Mr. Kenyon feels that most patents are generally respected and it is only the ones of questionable value which are litigated and hence the mortality in court is high. Since the general public only hears about the patents which are involved in court they obtain a distorted view as to the general situation. In other words, it is like the question of news. The papers do not write up the man who is good to his wife and family but the fellow who beats his wife or neglects his family will invariably prove newsworthy.

My Observations

In general, the writer is inclined to agree with the position and views of Mr. Cooper. While I do not believe that a patent should issue for every trifling advance, as a practical matter I think that even patents on such advances are justifiable, especially if they were issued for a shorter period of time than the normal seventeen year period. A very small advance would be entitled under the doctrine of equivalents to a very narrow interpretation. This would make it rather easy to avoid such patents and hence neutralize the main objection to such patents.

As for Mr. Kenyon's suggestion to improve the examination facilities of the Patent Office, I believe that no patent attorney or applicant will disagree.

Even if the recommendations of both Mr. Cooper and Mr. Kenyon were adopted, however, it is the writer's conviction that much would still have to be done in order to strengthen the patent system in this country. While I do not offer it as a panacea I cannot help but feel that propaganda efforts in "selling" the U. S. patent system have been directed to the wrong people. Such efforts have in the main been slanted towards the so-called average person or member of the public. The idea has been to point out the blessings of the U. S. patent system to him and to the country. From my own observation of the man in the street, especially the one who has thought up some idea which he thinks is patentable, I believe that such person does not have to be "sold" on the U. S. patent system. He instinctively believes in it. In fact, he seems quite astonished when he is told that even though a patent might be obtained on his invention the courts might hold it invalid. He just naturally assumes that a patent is "good." No, I am convinced that he is not the one to be "educated." In fact, I have an idea that he can do some "educating" of his own. For example, it might not be a bad idea if the Congressional Committees having to do with patent matters were to hold hearings in different places around the country instead of in Washington only. If such were done, instead of the witnesses before the Committees being for the most part representatives of large corporations or big-name patent lawyers the Committees would have the benefit of the views of the person in the street and, I firmly believe, would be struck with the inherent faith of the latter in our patent system. This is not to cast any aspersions on the fine gentlemen and organizations who give much of their time and money to following pending patent legislation and commenting helpfully thereon. However, the fact remains that, generally speaking, they are not "grass roots."

Perhaps, if the Congressional Committees were actually to go to the country, thereby permitting the independent inventor or a small organization to have an opportunity to voice their views a result might well be that Congress, and eventually the courts, would see that patentees are not hideous monopolists but just plain people trying to get ahead by making creative contributions which in the long run and in the aggregate will go far towards raising the standard and reducing the cost of living in the U.S.A.

Anti-Contaminant for Therapeutic Compositions

A novel use for a known material provides the subject of U. S. Patent 2,464,197, issued to Hans T. Clarke and assigned to the United States Secretary of War. Invention is based on the discovery that carboxymethoxylamine is an effective bacteriostatic agent and affords efficient protection against bacterial contamination of therapeutic compositions such as blood plasma and albumin compositions and also in the antibiotic field.

The claims cover an aqueous solution consisting essentially of carboxymethoxylamine hemihydrochloride in a culture medium as well as the method of inhibiting bacterial growths in culture media by incorporating the carboxymethoxylamine hemihydrochloride therein.

According to the patent, bacteriological investigations were made to evaluate the following variables:

1. Size of inoculum.
2. Strain of organism.
3. Media.

4. Temperature.
5. Duration of exposure to drug.
6. Drug concentration.

For the size of the inoculum, the compound was investigated using *B. coli* and a drug concentration of forty-five milligrams to 100 cc. The inventor found that all inocula varying from six organisms to one billion organisms per cc. were prevented from multiplying. In the event of hardy laboratory contaminants, the same phenomenon was observed, inocula varying from a few per cc. to thousands per cc. being prevented from multiplying. From practical experience, it was known that the chance contamination of biologic materials rarely runs above 300 organisms per c.c., so that the carboxymethoxylamine was effective in controlling the numbers of organisms of a usual laboratory contamination.

In carrying out the investigations relating to the control of laboratory contaminations, tests were conducted with *B. coli*, *B. pyocyaneous*, two gram-negative room temperature organisms, staphylococcus aureus and diphtheroids. These last organisms are said to represent the hardiest and most common laboratory contaminants. The room temperature organisms survive at 0°C., even growing to certain extent, and multiply luxuriantly at room temperature, while the other organisms grow best at 37°C. or slightly higher. A large number of other bacteria were studied and enough experiments have been carried out to satisfy the inventor that the phenomena applying to the hardier contaminants are true with all bacterial species. Thus, the carboxymethoxylamine was investigated in connection with the following organisms, cultivated in media which have been twenty-five per cent albumin solution, concentrated globulin solution and tryptic digest broth:

Eberthella typhosa	*Proteus Ox 2*
Sal. paratyphi	*N. intracellularis*
Sal. cholerasuis	*Proteus Ox 19*
Sal. shottmuelleri	
Shig. paradysenteriae	*Ps. aeruginosa*
Shig. sonne	*V. metchnikovi*
Proteus Ox K	*C. diphtheriae*
Streptococcus (alpha)	*B. subtilis*
Streptococcus (beta)	*B. anthracis*
Pneumoniae type III	Room temperature organisms (2 strains)

In general, the broth was found to be the best culture media, and somewhat higher concentrations of the compounds were necessary to inhibit growth in broth than were necessary in albumin or globulin solution. Carboxymethoxylamine inhibits equally the spore and the vegetative forms of the above species.

Viruses, yeasts and molds were not affected by carboxymethoxylamine in concentrations effective against bacteria. Roughly 100-fold the concentration which will inhibit the bacterial strains listed above is necessary to inhibit the growth of inocula of less than 1000 per c.c. of *Monillia albicans*. In small inocula of 1000 organisms per c.c., the action of the compound is roughly proportional to the number of bacteria present.

The minimal inhibiting amount of carboxymethoxylamine is bacteriostatic. Carboxymethoxylamine prevents cell division and causes cell gigantism and pleomorphism. Bacteria held in this state may be subcultured effectively into drug-free media at any time up to death, which may not take place for two weeks or more.

Studies of the action of the compound on large inocula (for instance five million organisms per c.c.) of bacteria held in drug concentrations just below or above the minimal inhibiting level have not demonstrated acquired resistance to the

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compound when the organisms are transferred to new environments containing below or above the minimal inhibiting drug concentrations. Increased concentrations of the compound may cause immediate death of small inocula less than 200 per c.c., especially if bacterial metabolism is accelerated by raising the temperature. Conversely, a low temperature may prolong bacterial survival in the presence of inhibiting concentrations of the compound. Increasing the temperature from 6°C. upward causes an increased effectiveness of the compound depending on the bacterial species. Temperatures up to 43°C. usually accelerate bacterial death, but in some species, such as staphylococcus aureus for example, there is slightly greater resistance to the compound at 43°C. Temperatures of 56°C. for 15 minutes will kill both vegetative and spore forms of the bacteria so far studied in the presence of the compound.

Recent Patents

U. S. 2,466,783—**R. Z. Sarff—Cosmetics Holder.**

U. S. 2,466,785—**E. P. Schreyer—Cosmetic Applicator.**

U. S. 2,466,897—**American Cyanamid—Pteridines.**

U. S. 2,466,915—**S. R. Shields—Hair Drier.**

U. S. 2,466,976—**H. B. Walton et al—Hair Curler.**

U. S. 2,467,570—**J. E. Ward—Nail paint applicator.**

U. S. 2,467,583—**Society des Usines Chimiques Rhone-Poulenc—Penicillin Solutions containing polyvinyl pyrrolidone.**

U. S. 2,467,602—**U. S. A.—2, 3-Bis-(Benzamido-methylthio)-Propanol.**

U. S. 2,467,692—**Therapeutic Research Corp.—Naphthyridones.**

U. S. 2,467,693—**Therapeutic Research Corp.—Amino Benznaphthyridines.**

U. S. 2,467,798—**U. S. A.—5, 5'-Dihydroxydiamyl Ether.**

U. S. 2,467,893 *to* 2,467,895—**American Cyanamid—Piperazines.**

U. S. 2,468,324—**Hoffmann-La Roche—Imidazolones Process.**

U. S. 2,468,401—**Research Corp.—Preparation of Substituted 2-Amino-Thiazoles.**

U. S. 2,468,426—**Parke, Davis—Carboalkoxyalkylcarboalkoxy Sulfides.**

U. S. 2,468,859—**Glaxo Labs.—Cholesterol Derivatives.**

U. S. 2,468,930—**Winthrop-Stearns—Thiamine 2-Ethylhexyl Sulfate.**

U. S. 2,469,173—**Ciba—Resolution of Doisynolic Acids.**

U. S. 2,469,267—**S. Hutt et al—Vanity Case and Atomizer.**

U. S. 2,469,554—**Merck & Co., Inc.—Process of Preparing the Lactone of2-Methyl-3-Hydroxy-4-Carboxy-5-Hydroxymethyl Pyridine.**

U. S. 2,469,576—**S. M. Ritter —Hair Curler.**

U. S. 2,469,618—**Eaton Labs.—Vaginal Suppository.**

U. S. 2,469,759—**A. T. Babienco—Compositions for Intravenous Treatment of Genito-Urinary Infections and Essential Hypertension.**

U. S. 2,469,763—**M. E. Conwell—Hair Oil Applicator.**

U. S. 2,470,084 and 2,470,085—**E. Bilhuber, Inc.—Substituted Amino and Alpha-Halogen Alkyl Tetrazoles.**

U. S. 2,470,108 and 2,470,109—**Hoffmann-La Roche—Heterocyclic Amines.**

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YOUR TRADE-MARK RECORD

By JOHN H. GRAHAM
International Patent and Trade-Mark Consultant

Fiscal Year Report of Trade-Marks

The Patent Office has recently issued its report for the fiscal year just ended. It contains some interesting facts which bear greatly upon the question of delays in the trade-mark division, which is quite a sore point with many trade-mark owners. Since the cosmetic, drug, toilet goods and equivalent trades contribute heavily to the load of trade-marks filed, the facts brought out may be quite revealing to some of us.

First of all, there are some 15,000 trade-mark applications filed each year and this has been pretty much the average from 1929 to date. Of these, in recent years usually some 7,500 are actually registered namely, about one chance in two for registration. The number of applications passing to issue has decreased. In 1929 there were 14,000 registered and this high percentage continued until 1942, when it dropped to 7,700.

In the fiscal year of 1948, the first big year of actual operation under the new Lanham Act, 34,100 marks were filed, 10,800 were published and 9,400 were registered. Thus, the number of marks filed greatly increased in number, as was expected. Of the 9,400 registered some 8,600 were filed under the old Acts of 1905 and 1920. When the fiscal year started in July 1947, there were 27,200 applications as a back-log of 1905 and 1920 Act marks.

Right now 40,000 marks await action by the Patent Office, but of these 17,000 are marks being republished under the new Act. Eight thousand, two hundred and ninety marks have been republished to date. The trade-mark division also disposed of 4,200 renewals during this time.

On the face of it, that 40,000 cases to be examined looks ominous. But it really is not, if you analyze what has been done in the year. The republished marks are in most cases routine in approach, so that about 23,000 are left which is several thousand less than the back-log a year ago, despite the biggest load of new cases in the history of the Patent Office. More examiners have been put into the trade-mark division and the speed of dealing with applications has increased somewhat recently and is bound to increase as the back-log is attacked and reduced.

It is interesting to note the figures of republished marks. You will recall that we discussed the unusual fact of a great slackening off of applications for republishing whereby 1905 Act marks could enjoy the benefits of the new Act. The reason was, that after the first flood of filings, a few began to feel that the great benefits of the new Act might boomerang in some cases, and when the few grew to many, the flood turned to a dribble.

As decisions appear interpreting this new Act, the dribble may increase to a stream, but many will still have a cautious approach, at least to the idea of republishing a well aged mark which is soundly established under the 1905 Act.

The Patent Office expected 100,000 marks would be republished on the assumption that 250 percent of all marks on the 1905 register would be filed in this manner. As of July 1949 only 29,212 cases had been filed for republishing, most of which were received in the first quarter of the year.

The reverse picture was true of new applications under the 1946 Act. The number received was a record of 34,116 of which actually 792 have so far been registered. This is probably accounted for by the filing of marks which did not stand much of a chance of registration under the 1905 Act, but which were registrable under the broader terms of the 1946 Act. Particularly, this applies to marks which may be geographic or merely the name of a person.

In the past, if the trade-mark examiner could find the name, however odd, in any telephone book or in an atlas for any obscure spot in the world, he could reject the mark. Now, proof of distinctiveness may overcome the fact that the mark is also a proper name or place.

Anyway, the picture stacks up pretty well for more speed and better results from the Trade-mark division. Very neccessary requirements, if business is to be protected from losses due to hard to calculate risks on trade-marks.

Slogan Refused Registration

As above mentioned, many have sat on the fence waiting to see how some of the revolutionary clauses of the 1946 (Lanham) Act would be interpreted.

One of the most discussed points has been how far will the Patent Office go in permitting slogans to be registered. On appeal to the Commissioner of Patents, a slogan was rejected as not being capable of indicating origin and being more of an advertising device than a trade-mark.

The mark refused was "THE FATE OF A FABRIC HANGS BY A THREAD" for rayon yarns, the applicant being American Enka Corp. The question was whether or not such

a slogan could be registered on the principal register. The several benefits of the Lanham Act particularly apply to this register. The supplemental register or service mark register are for slogans of this nature, according to the decision.

Actually, the only thing the particular decision does is to emphasize that a trade-mark must have a primary function of denoting origin of the goods and while laboratory expressions may sometimes do this, usully an advertising slogan is not a good trade-mark to adopt since it rarely will clearly denote the origin of the goods.

The following trade-marks were recently published in the Official Gazette of the U. S. Patent Office and are the complete listings through the end of April.

Shampette—VI—A—551,768 (And Des.)
Cosmart, Inc., N. Y., N. Y.
Ser. Mar. 12, 1948 D. U. Mar. 9, 1948

South Seas—VI—A—652,428
S. Wooton, Inc., dba J. V. Madsen Co., Glendale, Cal.
Ser. July 28, 1948 D. U. Apr. 20, 1948

Shredsope—IV—A—532,531
The J. R. Watkins Co., Winona, Minn.
Ser. Aug. 26, 1947 D. U. Feb. 4, 1925

Staber's for Beauty—VI—H—497,503
Staber's For Beauty, Los Angeles, Cal.
Ser. Mar. 1, 1946 D. U. Since 1934

Tang—VI—K—544,721
David J. Goodfriend, Phila., Pa.
Ser. Feb. 17, 1949 D. U. Nov. 26, 1947

Telegraph—IV—A—547,775
L. Rothschild dba Corona Soapcrafters, Redlands, Cal.
Ser. Jan. 22, 1948 D. U. Jan. 8, 1947

Tibet—VI—C—502,739
Consolidated Cosmetics, Chicago, Ill.
Ser. May 25, 1946 D. U. May 20, 1946

Union Maid—VI—AC—544,405 (And Des.)
Union Products, Inc., Chicago, Ill.
Ser. Dec. 15, 1947 D. U. July 11, 1947

Winsome—VI—ACH—547,955
Allied Home Prods., Corp., Beloit, Wis.
Ser. Jan. 26, 1948 D. U. Oct. 7, 1947

Yours for Loveliness—VI—BC—510,-768
Kay Daumit, Inc., Jersey City, N. J.
D. U. July 24, 1943

The following Trade-Marks were recently published in the Official Gazette of the United States Patent Office.

Arder—VI—BCD—563,529 (and des.)
Elizabeth Arden Sales Corp., N. Y., N. Y.
Ser. June 14, 1948

Atkinsons—VI—B—557,719
J. & E. Atkinson Ltd., London, England
Ser. May 25, 1948 D. U. Since 1872

Beauty in the Morning—IV—A—560,-588 (and des)
Universal Labs., Inc., East Orange, N. J.
Ser. July 1, 1948 D. U. June 4, 1948

Breck Brilliant—VI—H—549,343
John H. Breck, Inc., Springfield, Mass.
Ser. Nov. 12, 1947 D. U. December 1941

Budapest—VI—A—550,296
Beauty Masters of Beverly Hills, Inc., Milwaukee, Wis.
Ser. Feb. 21, 1948 D. U. Dec. 3, 1946

Cerny—VI—BC—512,401
Germaine Rene Duval, Seine, France
Ser. Dec. 31, 1947 D. U. March 3, 1919

Childsco—IV—A—562,323
Elizabeth M. Childs, DBA Childsco Prods., Co., Macon, Ga.
Ser. July 28, 1948 D. U. May 20, 1948

Creme-Pact—VI—C—529,771
Kathryn, Inc., Chicago, Ill.
Ser. July 28, 1947 D. U. July 8, 1947

Cuir de Lancome—VI—BC—539,326
Lancome, S. A., Paris, France
Ser. Oct. 28, 1947 D. U. Feb. 2, 1947

Derma-Fresh—VI—C—489,307
American Hospital Supply Corp., Chicago, Ill.
Ser. Sept. 23, 1948 D. U. Sept. 15, 1942

Devotedly Yours—VI—B—508,206
Avon Products, Inc., N. Y., N. Y.
Ser. Aug. 29, 1946 D. U. June 20, 1946

Distinguished Service — VI—I—551,-609
Colgate-Palmolive-Peet, Co., Jersey City, N. J.
Ser. March 10, 1948 D. U. Sept. 4, 1946

Don's—VI—H—516,510
D. C. Stokes, DBA Stokes Institute of Hair Technology, Newark, N. J.
Ser. Jan. 28, 1947 D. U. Aug. 1, 1936

Dream Heaven—VI—C—563,929
Interstate Sales Co., Waco, Texas
Ser. Aug. 24, 1948 D. U. March 10, 1948

Eau de Sachet—VI—B—563,895
Henri Bendel, Inc., N. Y., N. Y.
Ser. Aug. 24, 1948 D. U. April 24, 1941

Farnesiana—VI—BC—561,610 (and des)
Caron Corp., N. Y., N. Y.
Ser. July 17, 1948 D. U. Sept. 10, 1947

Flamboyant—VI—C—562,952
Lehn & Fink Corp., Bloomfield, N. J.
Ser. Sept. 10, 1948 D. U. July 15, 1948

Foot-Ill—VI—F—552,166 (and des)
D. M. Redmond, DBA Mecco Sales Co., N. Y., N. Y.
Ser. March 17, 1948 D. U. Sept. 1, 1947

Gene Salee—VI—BC—506,771
Gene Salee, Hollywood, Calif.
Ser. Aug. 2, 1946 D. U. Nov. 5, 1935

Golden Chance—IV—A—558,716
Harriet Hubbard Ayer, Inc., N. Y., N. Y.
Ser. June 8, 1948 D. U. May 7, 1948

Hawaiian Beauty—IV—A—531,472
Hawaiian Perfume & Soap Corp., Hollywood, Calif.
Ser. Aug. 15, 1947 D. U. July 30, 1947

Homme de Paris—VI—BC—507,196
M. Landon, DBA Parfums Saint Cyr, N. Y., N. Y.
Ser. Aug. 10, 1946 D. U. Since 1926

Invisible Accessory—IV—A—558,008
Consolidated Cosmetics, Chicago, Ill.
Ser. May 28, 1948 D. U. May 14, 1948

Jiffy—VI—H—558,036
A. C. Kaitz, DBA American Proprietaries, Phila., Pa.
Ser. May 28, 1948 D. U. July, 1926

Jiffy—VI—H—516,998
Pro-Capa Prods., Inc., Brooklyn, N. Y.
Ser. Feb. 5, 1947 D. U. Nov. 1, 1946

Khair—VI—H—494,854
L. Mann, DBA Leo Mann & Co., Boston, Mass.
Ser. Jan. 16, 1946 D. U. Since 1939

Kleeneze—IV—A—519,226
R. E. Sleight, DBA International Industrial Sales, Co., Phila., Pa.
Ser. March 18, 1947 D. U. March 11, 1947

Kylene—VI—C—560,430
Estelle Wyler, Inc., N. Y., N. Y.
Ser. June 29, 1948 D. U. March 1, 1948

Lanodine—VI—A—554,847
American Chemical Paint Co., Ambler, Pa.
Ser. April 17, 1948 D. U. Feb. 25, 1948

Lilly Dache—VI—BCE—553,013
The Parfums Lilly Dache, Ltd., N. Y., N. Y.
Ser. March 25, 1946 D. U. Sept. 6, 1935

Lola—VI—H—556,426
Lola Durham, Dayton, Ohio
Ser. May 7, 1948 D. U. March 1, 1946

Miraglo—VI—CE—562,271
M.V.C. Labs., Inc., Toledo, Ohio
Ser. July 27, 1948 D. U. Dec. 27, 1932

Nestle—VI—ACHG—549,567
The Nestle-Lemur Co., Meriden, Conn.
Ser. Feb. 12, 1948

Nimble—VI—F—563,152
Carte Co., Chicago, Ill.

Nina de Lisle—VI—BC—521,271
E. Norris, DBA Nina de LISle, N. Y., N. Y.
Ser. July 28, 1948 D. U. Dec. 23, 1946

Nue—VI—K—561,239
I. L. Holtz, DBA Dell Prod., Plainfield, N. J.
Ser. July 13, 1948 D. U. Feb. 2, 1948

Nulex—VI—H—564,459
Nulox Corp. of America, N. Y., N. Y.
Ser. Aug. 31, 1948 D. U. July 21, 1948

Okatea Red—VI—C—563,347
Lucien LeLong Inc., Chicago, Ill.
Ser. Aug. 13, 1948 D. U. July 20, 1948

Pandex—VI—C—550,572
A. I. Aaronson, DBA The Pandex Co., Baltimore, Md.
Ser. Feb. 26, 1948

Parfums Volnay—VI—BC—512,400
Germaine Rene Duval, Suresnes, France
Ser. Feb. 17, 1948 D. U. May 15, 1919

Parker-Belmont—VI—C—532,430
Dearborn Supply Co., Chicago, Ill.
Ser. Aug. 26, 1947 D. U. Dec. 27, 1920

Pascal Lorriaux—VI—B—520,403 (and des)
Jean-Pascal Lorriaux & Cie, Paris, France
Ser. April 9, 1947 D. U. Jan. 17, 1942

Persian Moss—VI—B—555,256
The Dow Chem. Co., Midland, Mich.
Ser. April 22, 1948 D. U. Jan. 26, 1948

Polycrest—VI—C—557,501
Clinical Prods. Ltd., Richmond Surrey, England
Ser. May 21, 1948 D. U. Jan. 26, 1948

Qwick Suds—IV—A—504,039
D. J. Dellaripa, DBA Sterling Soap Mfg. Co., Middletown, Conn.
Ser. Oct. 2, 1948 D. U. June 30, 1946

Reservation for Two—VI—B—517,222 (and des)
Allen B. Wrisley Co., Chicago, Ill.
Ser. Feb. 8, 1947 D. U. November 1944

Rochester—VI—H—563,952
A. Pacini, DBA Hollywood Cosmetics Co., Memphis, Tenn.
Ser. Aug. 24, 1948 D. U. July 6, 1948

Rose Magnolia—VI—C—503,943
Helena Rubinstein, Inc., N. Y., N. Y.
Ser. Jan. 14, 1948 D. U. April 1, 1946

Skid—IV—I—564,111
Abraham S. Gechtman, Newark, N. J.
Ser. Aug. 25, 1948 D. U. June 1948

Spra-Tan—VI—C—500,301
H. Clay Glover Co., Inc., N. Y., N. Y.
Ser. Sept. 1, 1948 D. U. Jan. 18, 1946

Stephan's—VI—H—555,318
Stephan Products Inc., Worcester, Mass.
Ser. April 22, 1948 April 1932

Textone—VI—C—557,593
Chryson's Ltd., Los Angeles, Calif.
Ser. May 22, 1948 D. U. June 23, 1936

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Industry's Books

The Essential Oils, by Ernest Guenther, Ph.D., Vice President and Technical Director, Fritzsche Brothers, Inc., Volume Two, The Constituents of Essential Oils, Co-author Darrell Althausen, Ph.D., Manager, Clifton Factory, Fritzsche Brothers, Inc., 852 pp., D. Van Nostrand Co., New York, $10.

The present volume, the second in a series on the essential oils, represents an attempt to eliminate at least some of the tedious "spade-work" necessarily performed by the essential oil chemist. To this end, data on several hundred of the most important natural constituents of essential oils have been assembled into one volume, in the form of monographs, and brought as nearly up-to-date as possible. The structural formulas, occurrence, methods of isolation and identification, and physicochemical properties of these compounds have been described. Succeeding volumes of this series will deal with individual essential oils and their chemical composition, and frequent reference will be made to the monographs contained in this volume. A secondary aim of the present work is to stimulate further research in the field, particularly on essential oils of which the chemical composition is, so far, either only partially elucidated or entirely unknown. Contents: *The Constituents of Essential Oils*. I Hydrocarbons, II Alcohols, III Aldehydes, IV Ketones, V Phenols and Phenol Ethers, VI Quinones, VII Acids VIII Esters, IX Lactones, Coumarins, and Coumarones, X Furan Derivatives, XI Oxides, XII Compounds Containing Nitrogen and Sulfur. *Terpenes, Sesquiterpenes, and Derivatives of Unknown Constitution:* I Hydrocarbons, II Alcohols III Ketones, IV Phenols, V Lactones, VI Miscellaneous Compounds. *The preparation of Derivatives of Essential Oil Constituents.* I Hydrocarbons, II Alcohols, III Aldehydes and Ketones, IV Phenols and Phenol Ethers, V Acids, VI Esters, VII Lactones and Anhydrides, VIII Other Constituents. Index.

Handbook of Chemistry and Physics, A Ready-Reference Book of Chemical, And Physical Data, Thirty-First Ed., Editor in Chief Charles D. Hodgman, M. S., Associate Professor of Physics at Case Institute of Technology 2737 pp., Chemical Rubber Publishing Co., Cleveland, $6.

The Handbook of Chemistry and Physics, which has just appeared in its 31st Edition, is widely accepted as the most important reference book in its field. Compiled in five sections, it includes complete mathematical tables; properties and physical constants of the elements; properties of organic and inorganic compounds; chemical tables; tables of specific gravity; properties of matter; heat and hygrometry; sound; electricity and magnetism; light; conversion tables; photographic formulae; table of plate and film speeds; and a vast amount of other important data. Much new material appears in this new edition. A table of logarithms of decimal fractions has been added; also a table of squares of the Sine and Cosine and their product. The former table of arrangement of electrons in orbits has been replaced by a table of electronic configuration of the elements. In step with the trend toward more intensive study of nuclear physics, a table of isotopic masses has been included; also a table of wave lengths of the principle lines in the emission spectra of the elements. This table is taken from data only recently available. Complete revisions and new material added to the Handbook amount to 180 pages.

Practical Bacteriology, Hematology and Parasitology, by E. R. Stitt, M.D., Ph.M., Sc.D., LL.D., Rear Admiral, Medical Corps, and Surgeon General, U. S. Navy, Retired, Paul W. Clough, M.D., Physician-in-Charge of the Diagnostic Clinic, Johns Hopkins Hospital, and Sara E. Branham, M.D., Ph.D., Sc.D., Senior Bacteriologist, National Institute of Health, Tenth Ed., Illus., 991 pp., The Blakiston Co., Phila., $10.

With the collaboration of eminent writers in special fields, this edition presents all types of laboratory procedures, including clinical chemistry. Emphasis is on practical details of technic, guidance in the selection of approved methods, and interpretation of findings. Methods for identification of bacteria, filtrable viruses, immunity, preparation of culture media, reagents, staining methods, vitamins are thoroughly revised to date and extended. Technic for clinical blood examinations and the study of normal blood and blood diseases are carefully detailed. Keys to helminths, blood protozoa, medical parasites, tapeworms, scorpions, ticks, spiders, mites, insects, poisonous snakes, lizards, fish and coelenterates are included. Tests of liver function, urine, feces, gastric contents, endocrines, vitamins, pus, sputum, skin infections, food vitamins and deficiency diseases are presented up to the minute.

Trace Elements In Food, by G. W. Monier-Williams, Formerly Inspector of Foods, Local Government Board, Ministry of Health, 511 pp., John Wiley & Sons, Inc., New York, $6.

Trace elements can be beneficial, innocuous, or harmful, depending on the quantity present in food. The author discusses the effect of different quantities of each trace element on animals and men, and explains methods by which the amount present in food may be determined. In addition to these analytical methods, Mr. Monier-Williams also covers many other aspects of the field of trace elements. This complete coverage includes: the biochemistry, nutritional significance, and toxicology of trace elements—a discussion of how far the presence of each trace element in food is due to its being an essential or occasional constituent of plants, or to the use of its compound in agricultural practice—an examination of the many ways a trace element may gain access to food from manufacturing processes or commercial usage. Mr. Monier-Williams has included in his discussion all elements which are present in the human body, and in most foods, in amounts up to 0.005 per cent. This brings into the discussion iron, which is not usually regarded as a trace element in the body, but which is certainly so in food.

Compounder's Corner

Levigating Agents in Ointment Making

M. Hartman and L. C. Zopf (*J.A.Ph.A., Pract. Ed.* 10:214, 1949) remark that the production of a good ointment is basically dependent upon the (1) incorporation procedure, (2) levigating agent or agents employed, and (3) compounding skill. Of the more common medicinal agents incorporated in ointment vehicles none presents a greater challenge to skill and dexterity than those prescriptions containing sulfur, Peruvian balsam ichthammol, or phenol. In a study conducted at the State University of Iowa, six substances were employed as levigating agents and the one most desirable for use in incorporating each of the above ingredients was determined.

Lanolin, liquid petrolatum, castor oil, glycerin, propylene glycol, and polyethylene glycol 400 monostearate were employed as levigating agents in this study. This group includes the levigating agents commonly employed in the preparation of official ointments as well as the two newer agents, propylene glycol and polyethylene glycol 400 monostearate. These two substances were included in this study because of their chemical inertness, physical property of lubricity, as well as their ready miscibility with the medicinal substances under consideration.

The miscibility of each medicinal substance with the various levigating agents was determined by mixing them in a test tube and also by mechanically incorporating them in a mortar and pestle. Solubility, alone, is not the determining factor for the efficacy of a specific levigating agent—the factor of compatibility of the agent with the ointment base also must be considered.

As a result of these studies, the following recommendations are made: (A) From the standpoint of appearance and ease of incorporation castor oil or polyethylene glycol 400 monostearate is preferred as the levigating agent for Peruvian balsam ointments; (B) Because of the ease of incorporation and the production of a homogeneous ointment, 10 per cent of lanolin is the desired levigating agent for use in preparing sulfur ointments. While this may not be the most rapid of preparation, the resulting product is the most desirable one of this series. If there is an objection to the use of lanolin, glycerine is then the most desirable levigating agent to use. In preparing sulfur ointments the slab method is preferred to the mortar and pestle method because a more homogeneous dispersion of the sulfur can be obtained. Because of the ease of levigation and the rapidity of incorporation, polyethylene glycol 400 monostearate is the preferred levigating agent when ointments containing ichthammol are to be prepared. (D) None of the levigating agents studied presented any advantages over the official method, thus when a phenol ointment is prescribed it is recommended that the U. S. P. XIII method of preparation be employed. In the official method, 2 per cent of glycerine is the levigating agent.

Preferred Formulas for Solid Brilliantines

Another report in the series of surveys, this one on solid brilliantines, is given in the Alchemist (3:44, 1949). In this test, eleven solid brilliantines, prepared according to formulae taken from the literature, were submitted to the appraisal of a number of men. Although opinions were rather divergent, information was obtained with respect to the public's preferences and dislikes. The preparation which was found to be most preferable was based on the following formula from S. P. Jannaway's text:

Paraffin wax	**15 parts**
Petroleum jelly	**60 "**
Mineral oil	**25 "**

The solid brilliantine which received the second highest rating is made from:

Spermaceti	**14 parts**
Wax	**6 "**
Mineral oil	**100 "**

Thixotropy in Cosmetics

Thixotropy, a physical phenomenon familiar to the colloid scientist, has been utilized in many fields of applied chemistry, such as the paint industry to prevent pigment sedimentation in the production of oil well drilling fluids, in making gelled gasoline for flame-throwers, and in the manufacture of many wax polishes. According to G. Kempson-Jones (*Manuf. Chem. & Manuf. Perf.* 20:167, 1949), it is only within recent years that this reversible gel-sol system has found much application in cosmetic chemistry. He notes that the term "thixotropy" comes from a Greek word meaning literally "to change by touching."

A typical example of the phenomenon of thixotropy is provided by a bentonite sol. If a 4 per cent colloidal dispersion of bentonite is thoroughly shaken it can be poured freely into a narrow test tube. After a few seconds have elapsed the tube can be inverted without the bentonite colloid flowing out. If the tube is shaken the gel again reverts temporarily to the sol, and it can be poured out. By removing the larger bentonite particles with the aid of a centrifuge a colloid of optimum particle size results, and as low as a 1 per cent sol can possess a high degree of thixotropy.

Liquifying cleansing cream, says Kempson-Jones, is one of the earliest and best known examples of thixotropy in cosmetics. In this type of product, mineral oil is gelled with ozoperite, ceresine or a microcreptalline paraffin wax. A simple basic formula consists of:

Ozokerite	**20 parts**
Mineral oil	**80 "**

It is essential that the wax used should have no tendency to crystallize coarsely, and even then the product may have a tendency to "sweat" with ageing owing to a progressive breakdown of the initially homogeneous gel structure. The addition of small percentages of materials such as lanolin, petroleum jelly, cetyl or stearyl alcohol does much to retard such a breakdown. This type of cosmetic appears as a semi-transparent, outwardly rigid product, yet upon slight pressure from the finger-tips the surface immediately liquefies. After standing a short while the liquid film re-gels.

One of the most desired properties of a lipstick or lip salve is that the stick should possess considerable outward rigidity, yet apply as softly and as smoothly as a cream. A few products on the market do possess this trick of thixotropy to a marked degree, and one of the most satisfying things about such a stick is that it is also endowed with good molding properties. Kempson-Jones suggests that the following formula for a lipstick base can be used as a basis for experiment. The sticks produced possess good molding properties coupled with a pronounced thixotropy on application:

Carnauba wax	10 parts
Beeswax	15 "
Lanolin	5 "
Cetyl alcohol	5 "
Castor oil	65 "

A lip salve, possessing good application properties combined with fairly high thixotropic behaviour, can be produced from the following basic formula:

Ceresine wax	30 parts
Beeswax	7 "
Petroluem jelly	10 "
Cetyl alcohol	10 "
Mineral oil	40 "
Medicaments	3 "

The latest, and one of the most important applications of thixotropy in cosmetics has been the liquefying type of make-up foundation. In this preparation the thixotropic effect is really exploited to the full, with notable advantages from the users' viewpoint. The formulation is fairly simple, and a good basic formula is:

Powder base	40 parts
Carnauba wax	10 "
Isopropyl myristate	50 "

A moderate degree of thixotropy is considered very useful in certain oil-in-water and non-aqueous type creams, like cold, massage and barrier (skin protective) creams, hair pomades and brilliantines. This is especially true in the case of products designed for shipment to hot-climate countries. A desirable rigidity can be maintained under comparatively extreme conditions, without any loss of softness and ease of application. However, in many cosmetic preparations, such as lotions and leg make-up products, any suggestion of thixotropy is undesirable. Bentonite is sometimes used in preparations containing suspended powders and, from the example cited, this clay may be an offender and is best omitted in such cases.

Synethtic Detergent Cream

In the January-February, 1949 issue of The Bulletin of the American Society of Hospital Pharmacists, J. E. Birmingham presents the following formula for a synthetic detergent cream:

Sodium Sulfate	100
Cetyl Alcohol	70
Sodium Lauryl Sulfate	200
Sodium Bicarbonate	5
Water	580

Melt the cetyl alcohol. Dissolve the sodium lauryl sulfate and sodium bicarbonate in 400 cc. of the water by the aid of heat. Dissolve the sodium sulfate in the remainder of the water and warm this solution. While stirring the sodium lauryl sulfate solution, add the melted cetyl alcohol. To this mixture add the sodium sulfate solution slowly stirring constantly. Stir vigorously for several minutes and allow to cool. Oil of lemon or benzaldehyde may be added for desired fragrance.

Infrared Drying of Tablet Granulations

The manufacture of compressed tablets involves four important steps: The weighing of the ingredients, the granulating, the drying, and the compressing of the dried granulation into desired shapes of tablets. The processes of mixing, granulating and compressing have been greatly improved and speeded up. However, as noted by B. N. Patel, G. L. Jenkins and H. G. De Kay (*J. A. Ph. A*), Scient. Ed. 38:247 & 250, 1949), the operation of drying the granulation has remained practically unchanged and still requires as much time, if not more, as the other three steps combined. Because of the growing importance and use of compressed tablets they felt that ways should be devised to shorten the drying time.

In studying the problem, they discovered that of the various ways of applying heat to an object, radiation is recognized as the most efficient, provided the path that the radiant energy has to travel can be kept short. It is characteristic of this type of drying that heat will be radiated from a heat source regardless of interposed air. They therefore started to investigate the possibility of using heat radiations produced by infrared lamps to shorten the time required to dry tablet granulations without adverse effects on the materials treated.

The following conclusions were drawn as a result of these investigations: 1. Heating by infrared lamps was rapid and the heat distribution was uniform throughout. Best results were obtained with a 375-watt white bulb at a distance of 22 inches. The 375-watt blue bulb caused decomposition in many cases. It was not clear whether the chemicals which were designated as light-sensitive were affected by the infrared light or not. 2. Rate of drying depends on the moisture content of the material and the thickness of the bed of granules. Thickness of ¼ inch gave better results than thickness of ½ inch. 3. Use of radiant heating by infrared lamps on an industrial scale can be more economical as compared to air-drying ovens since, in the latter case, it is necessary in big factories to maintain the oven constantly at heat in readiness for work at all times. Further, it is necessary that the temperature be brought to a peak in the ovens long enough before they are to be used so that they will be ready to dry the material put into them. For the same reasons, a substantial amount of stored heat is lost at the end of the day if the ovens are maintained on an eight-or sixteen-hour cycle. With the infrared equipment it is not necessary to turn on the light until the granulation is actually ready for drying. 4. There is a field for further study in the drying of tablet granulations by infrared lamps. Granulating equipment can be connected to a drying tunnel consisting of a movable belt or screen as a means of conveying the uniformly spread wet granules to be dried by the heat of the infrared lamps attached to the inner walls of the tunnel; thus granulation can be effected continuously. The tunnel can be constructed on the principles of the automobile industry which uses infrared lamps to bake paints on automobile bodies. The tunnels can be equipped so as to process conveniently small as well as large batches.

In the second part of the investigations by Patel, Jenkens and De Kay, the infrared drying process was tried on a variety of preparations. Twenty-two formulas containing inorganic compounds, 19 formulas containing organic compounds, and 14 compound formulas were granulated using the usual technique. The granules were dried under infrared lamps and compressed after lubrication. Favorable results were obtained in about ninety per cent of the cases. Temperature and period of drying in a majority of the cases were below 60° and 25 minutes, respectively. Results of assays on the granulations showed complete absence of untoward effects of infrared heat.

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Mandelic Acid

(*Continued from page 79*)

mandelate in doses of 25 to 200 cc. without harmful effects.

In another study, Carroll and his coworkers[8] gave from 1 to 4 times the normal dose of mandelic acid to dogs over periods of 10 to 30 days. Miscroscopic examination of the liver and kidneys disclosed evidence of toxicity. This varied from areas of focal necrosis in the dogs given larger doses over a longer period of time to simple clody swelling with the smaller doses over a shorter period of time. Three dogs given normal doses of mandelic acid showed no permanently bad effects.

Ormond[38] gave rats enormously high doses of mandelic acid. The amounts varied from 20 to 150 gm. per kg. of body weight distributed over 21 to 44 days. The animals were killed and in no case were kidney or bladder lesions found.

Among the toxic effects of mandelic acid which have been observed clinically in humans are acidosis, temporary deafness and tinnitus, pyrexia, diarrhea, headache, renal irritation as evidenced by the presence of albumin and granular or hyaline casts in the urine, or dysuria, muscular aching, nausea, liver damage and urticaria. Of these, nausea and diarrhea are the most commonly encountered but usually do not interfere with the treatment. Dysuria and hematuria are more serious complications, and indicate discontinuance of the therapy. It is the consensus of opinion that mandelic acid is contraindicated in the presence of renal insufficiency, as an inadequate concentration is obtained in the urine, renal irritation may result, and serious acidosis may occur from retention of the acid.[36]

Clinical Reports

Rosenheim's original clinical trials of mandelic acid therapy in 1935 and 1936 involved cases of cystitis and pyelitis, and the results were very promising.[42,43] Lyon and Dunlop in 1935 reported even more favorable results in these conditions.[31] In 1937, Cook and Buchtel[12] summarized the results in 500 cases of various urinary infections in which the incidence of cures was over 80 per cent. Newns and Wilson[37] and also Payne and Signy[39] found the drug valuable in pyelitis and pyuria in children. Other early reports were those of Helmholz,[23,24] Carroll,[6,7,8] and Holling and Platt.[27] Over the ensuing five year period the value of mandelic acid therapy in pyuria,[14] pyelitis,[10,34,45] pyelonephritis,[15] pyelitis of pregnancy,[35] and miscellaneous urinary infections[8,12,18] was definitely established. In 1946, Carroll and Allen[3] emphasized the continuing importance of the therapy in a publication describing their results in 200 cases of urinary infection.

Comparison of Modern Urinary Antiseptics

Recently, Carroll and his coworkers[4] published the results of a comparative study on the bactericidal

potency for Pseudomonas aeruginosa of mandelic acid, penicillin, streptomycin and sulfadiazine. In their experience, urinary infections caused by this organism are frequently refractory to treatment. Cultures were made from the infected urine of 39 patients and the bactericidal agents were used in various concentrations. Both sulfadiazine and penicillin were found to be ineffective in therapeutically practical concentrations, while mandelic acid was found to be bactericidal at pH 5.5, and streptomycin in concentrations of 1 to 10 units at pH 7.6. Additional experiments with streptomycin demonstrated that bacteria are prone to develop resistance if inadequate doses are given. Resistance may also develop if streptomycin dosage is given at an improper pH level. The authors concluded that mandelic acid should be used in cases where patients cannot be hospitalized and where sensitivity tests demonstrate a high resistance to streptomycin.

In another recent report, Duca and Scudi[19] compared the activities of methenamine mandelate, sulfathiazole and streptomycin against organisms commonly found in urinary infections. Although no wide differences were observed in the bactericidal and bacteriostatic activities of the three drugs, there was a marked difference in the degree of resistance exhibited by the organisms. Resistance to the mandelate appeared, if at all, very slowly and to a limited degree, while resistance to the other two drugs, and particularly to streptomycin, developed rapidly. Organisms rendered resistant to the other drugs remained susceptible to the mandelate.

The salient features of the several drugs may be summarized as follows:

Mandelic Acid

Mandelic acid is bactericidal for the majority of urinary pathogens at a pH and concentration easily attainable in vivo. It is bactericidal or bacteriostatic against gram-negative rods, and also against Shigellae, Salmonellae, and Streptococcus faecalis, against which the sulfonamides are ineffective. It is specific against Escherichia coli, which accounts for 86 per cent of urinary tract infections. Usually it is clinically ineffective against Proteus vulgaris, which splits urea, rendering the urine difficult if not impossible to acidify. In the case of sulfonamide sensitivity, mandelates are also indicated. Most failures with mandelic acid result from inadequate therapy or failure to sufficiently acidify the urine. Toxic effects are rare and when they occur are usually of a minor nature.

Sulfonamides

Like mandelic acid, the sulfonamides are effective in many urinary tract infections caused by gram-negative bacilli with the exception of Streptococcus faecalis. They have the advantage of being bacteriostatic in alkaline urine and are, therefore, effective in

(Continued on page 104)

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Various methods, such as pellet implantation, have been tried in order to prolong the action of hormones. A new and better approach to this problem, with respect to testosterone, is given in the report by Carlinfanti and his associates (Lancet 1:479, 1949). They have prepared testosterone in a slowly absorbable form by making use of insoluble aluminium salts. They borrowed this idea from the field of vaccine prophylactics where such salts are used as adjuvants. The long-acting testosterone is prepared as follows: To a solution of 1 Gm. of crystalline testosterone in 10 ml. of 96 per cent ethyl alcohol is slowly added, with constant stirring, 20 ml. of an aqueous suspension of aluminium phosphate, 7 mg. per ml. The mixture is allowed to sediment, and the supernatant fluid is decanted off. The residue is made up to 40 ml. with saline solution. Pure testosterone, which is less irritant than the propionate ester, is used. This preparation is claimed to be stable and, unlike the usual aqueous suspensions of the hormone, capable of being administered with a fine needle. Experiments with guinea pigs have shown that it reduces the frequency of injections to one a month or less.

Doubt Value of Combining Sulfa Drugs

A number of reports have been published concerning the advantages of using various combinations of sulfonamides. The chief advantage of sulfa drug combinations is said to lie in the reduction of cases of crystalluria. It is noteworthy, therefore, that S. Garb and L. A. Janoff (*J. A. M. A.* 139:1294, 1949) take issue with this view. It is their opinion that in the average conditions under which the sulfonamide compounds are employed, the alleged benefits from the use of a combination of sulfonamide compounds with respect to the control of crystalluria are small and frequently negligible. Unless there are some contraindications, they urge dependence on sufficient sodium bicarbonate together with sulfadiazine as a means of preventing crystalluria, rather than on the use of mixtures of the sulfonamide compounds with the attendant increased risk of drug sensitivity reactions.

X-Ray Treatment for Scalp Ringworm

It has long been believed that X-ray epilation is only an adjunct in the treatment of ringworm of the scalp, and that it is the local application of fungicides that really brings about the cure. Contradiction of this view is given in the studies reported by F. L. Lydon T. Strephanides and T. M. Robb (Brit. Med. J. 1:523, 1949). In their work, treatment of this condition consisted of X-ray epilation without subsequent local applications. No complications result from therapy except occasional headache and vomiting on the night of treatment, and there were no cases of aloepecia, local of general.

From follow-up studies it was found that out of 103 patients with ringworm of the scalp who received no treatment other than X-ray epilation 90 (87.37%) showed no signs of relapse after an interval of time ranging from eight to twenty-four months. These 90 were made up as follows: 68 cases of M. audouini infection, 19 of ringworm fungus., and 3 diagnosed clinically and by Wood's light. It should be added that as no complaints have been received concerning the other 13 cases it can be assumed on fairly certain grounds that they too have remained free from relapse. This being so, the total percentage of cures may have reached 100. In the opinion of the investigators, these results show that the local application of fungicides is unnecessary, at least in cases of M. audouini infection.

Aureomycin in Primary Atypical Pneumonia

The disease generally known as "primary atypical pneumonia" or "viral pneumonia" is now well established as a clinical entity. The fully developed case can usually be recognized by the nature and course of the symptoms, the character of the physical and roentgenographic findings in the lungs, the absence of sustained leukocytosis and the failure to find significant pathogenic bacteria in the blood, sputum or lungs or to obtain clinical cures with the available antibacterial agents. All workers agree that the sulfonamides and penicillin are entirely ineffective in primary atypical pneumonia except possibly so far as they may influence bacterial complications, and even the evidence for the occurrence of such complications in any appreciable number of cases is quite meager. Of significance, therefore, are the results obtained by M. Finland, H. S. Collins and E. B. Wells (*New England J. Med.* 240:241, 1949) with aureomycin in the therapy of this disease. In their studies a small group of patients with the characteristic clinical, X-ray and laboratory findings of primary atypical pneumonia were treated with aureomycin by mouth. They were all moderately or severely ill when this treatment was started, and their fever and symptoms began to improve promptly and subsided in all cases within twelve to forty-eight hours. Cold agglutinins appeared in high titer late in the acute illness or during convalescence in the serum of all of these patients. The findings in these cases suggest that aureomycin had a favorable effect on the course of the disease.

Tetra-Chloro-Para-Benzoquinone in Fungus Infections

In an article in the Archives of Dermatology and Syphilology (59: 94, 1949), T. H. McGavack and his associates report that tetra-chloro-para-benzoquinone has been employed in 155 cases of human fungous infections as an ointment in concentrations varying from 5 to 50 per cent. Of 96 patients with infection due to Microsporon audouini, 24, or 25 per cent, were permanently cured. All but 6 of the remainder were improved. Of 39 patients with other types of tinea capitis (exclusive of that due

to M. audouini) 24, or 61.6 per cent, were cured, while each of the others was improved. Concentrations of the drug in an ointment base varied from 5 to 50 per cent.

In 1 case each of tinea favus and tinea veriscolor there was apparently no improvement effected by treatment with tetra-chloro-para-benzoquinone as a 5 per cent ointment in a wool fat-petrolatum base. The condition in 3 cases of tinea cruris was aggravated by tetrachloro-para-benzoquinone when used both as an ointment and as a powder. Seven of 11 patients suffering from epidermatophytosis were cured by the use of tetra-chloro-para-benzoquinone as a dusting powder in the shoes and on the lesions; 3 of the remainder were improved; 1 was not helped. It is concluded that the compound is an effective fungicide, with low toxicity, capable of application in the human being to a wide variety of parasitic cutaneous infections. For a number of years, under the trade-name "Spergon," this agent has been employed as an antifungal protectant treatment for seeds.

Evaluating Compounds as Scabicides

In the report presented by G. W. Eddy (*J. Investig. Dermatol.* 12:117, 1949) preliminary evaluations against human scabies (*Sarcoptes scabiei hominis* (Hering)) were made with 30 preparations, about 26 of which contained organic compounds that had not been tested previously as scabicides. No live mites were found following the use of nine of these new formulas; however, some of the formulas possessed certain objectionable features. The more promising compounds appeared to be benzyl salicylate; methyl ester of 4-*tert*-butyl-phenoxyacetic acid; methyl ester of (3, 4-methyl-iso-propyl) phenoxyacetic acid; and 1, 2, 3, 4-tetrahydro-2-naphthol-*n*-butyrate. Certain other formulas also showed definite promise as scabicides.

Streptomycin for Contaminated Wounds

In the opinion of C. K. Kirby and his associates (Surgery 24:647, 1948), streptomycin appears to be a more suitable agent for application to wounds than the sulfonamides or penicillin. It has a wide antibacterial range, being effective against both gram-positive and gram-negative organisms. It acts rapidly in the presence of blood and pus and is relatively nontoxic. In the experiments reported by these workers, sutured wounds produced in dogs have been inoculated with a standard dose of gram-positive and gram-negative organisms; a method resulting in 100 per cent wound infection and 53 per cent mortality in control animals. Prophylactic systemic (intramuscular) administration of streptomycin was effective in controlling the infection, as evidenced by a reduction in mortality, toxicity and septicemia. A single local application of 50,000 units of streptomycin in an ointment base appeared to be as effective as intermittent intramuscular administration for six days. This was true both when the streptomycin was applied locally at the time of inoculation with the organisms and when applied eight hours later after multiplication and invasion of the bacteria had begun. The occurrence of streptomycin-resistant organisms in many human traumatic wounds would be expected to limit the clinical effectiveness of streptomycin in the ointment base used in these experiments. In addition, the ointment base causes separation of the wound edges and acts, to some extent, as a foreign body.

New Treatment for Vaginal Infections

S. P. Norman and P. P. Norman (*J. Lancet* 69:60, 1949) report that vaginal and cervical infections may be eliminated by the use of tampons soaked in glycerite of hydrogen peroxide. The compound provides hygroscopic and deodorant effects, is bacteriotoxic and is lethal to *Trichomonas*. They obtained complete remission with one treatment in most cases and with two treatments in others. After such therapy, infection recurred in only one of twenty cases.

Nicotinic Acid for Migraine

Additional evidence is presented by R. F. Grenfill (Amer. Pract. 3: 542, 1949) to show that nicotinic acid is a safe, simple means of treating the acute attacks of migraine. In 15 patients suffering with true migraine, nicotinic acid was administered intravenously for a total of 31 times. This form of therapy was successful in 13 patients and caused no toxic manifestations in any of them. Because no increase in blood pressure or pulse rate resulted, it appears possible to use this drug even in the presence of cardiac pathology and hypertension.

Iron Sucrose Preparation for Injection

In their report in the *Lancet* (I:11, 1949), H. G. B. Slack and J. F. Wilkinson describe the following procedure for making a stable iron-sucrose preparation suitable for intravenous administration in anemia: Dissolve 5.8 Gm. anhydrous ferric chloride in 50 ml. distilled water on a water both at 95°C. Add 28 Gm. sucrose and heat until dissolved. Dissolve 1.8 Gm. anhydrous sodium carbonate and 5 Gm. sodium hydroxide in 25 ml. water each. Add the carbonate solution to the ferric chloride solution with stirring, then add the sodium hydroxide solution, stir for 15 minutes, filter into rubber-capped vials or into ampoules and autoclave for 20 minutes. After autoclaving, a clear, dark brown solution is obtained, with a *p*H of about 10.5, which remains stable at room temperature for at least 12 months. The solution contains 2 per cent of iron and 200 mg. is therefore contained in 10 ml. The scheme of dosage adopted in the treatment of 60 cases of iron-deficiency anemia was 25 mg. on the first day, 50 mg. on the second day, 100 mg. on the third, and 200 mg. on the fourth and subsequent days, the injections being given into the antecubital veins at the rate of about 2 ml. per minute; the treatment was usually complete in 10 out-patient visits. Reactions, if any, were mild. With a further 60 patients treated with a commercial iron-sucrose preparation there was no detectable difference in tolerance or response.

From these observations, Slack and Wilkerson gained the impression that these iron-sucrose preparations are relatively safe and effective vehicles for giving iron parenterally. Reactions, if any, were mild, and only four small local venous thromboses have occurred in over eight hundred injections. They conclude that these preparations will be valuable in the treatment of iron-deficiency anemia that has proved refractory to iron given by mouth, or of patients who do not tolerate iron by mouth in adequate doses.

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READERS' QUESTIONS

BRUSHLESS SHAVING CREAM: We would be much obliged to you if you could give us a formula for making a good brushless shaving cream. Stockholm.

I think the following will meet your requirements:

Triple pressed stearic acid	**20.00**
Powdered cocoanut oil soap	**0.50**
Cetyl alcohol	**1.00**
Mineral oil (65-75)	**6.00**
Glycerine	**0.00**
Potassium hydroxide	**0.25**
Water	**62.25**
Triethanolamine	**1.00**

The stearic acid and mineral oil are melted together and brought to 70°C., at which temperature the cetyl alcohol is added. Meanwhile the water is heated to 75°C. and the potassium hydroxide dissolved in it. This is followed by the powdered soap after which glycerine and triethanolamine are added and the whole is stirred until solution is perfect. This solution is slowly but steadily poured into the melted fatty materials at a rate of speed which will not allow the temperature difference of five degrees to change, while the agitator is turning quite rapidly. After all the water has been added the rapid agitation is continued until the cream begins to thicken after which it is slowed down to avoid beating air into the cream, a contingency which would make it spongy. Temperature control is very important. The solution should never be more than five degrees above the temperature of the melted fats. This cream has a fine luster. It is of good average consistency. It spreads well and is readily soluble. It provides a comfortable shave. Is solubility can be further enhanced by decreasing the mineral oil.

COMPRESSED INCENSE CONES: As a subscriber, I would like to avail myself of your services in providing me with information on the composition and formulation of compressed incense cones. Palm Beach.

Manufacture of compressed incense cones is rather well established and methods for making such products are given in some of the older texts on perfumery. For example, a product of this sort is given in Poucher's text as follows:

Siam benzoin	**100**
Tolu balsam	**50**
Charcoal	**700**
Saltpetre	**50**
Sandalwood oil	**50**
Patchouli oil	**15**
Cascarilla oil	**30**
Grain musk	**5**
Mucilage of acacia	**sufficient**

Powder the gums, add the charcoal and potassium nitrate, spray on the essential oils and then mass with the acacia mucilage. Finally, press the mass into concial molds.

BUBBLING BATH: I should like to ask your cooperation in supplying me, if possible, with some simple recipes for bubbling bath. Kalonah.

Products of this sort are illustrated in the following two formulas, which I believe will serve your purpose.

I

Sodium bicarbonate (dry)	**30.0**
Tartaric acid (dry)	**17.0**
Borax (dry)	**5.0**
Sodium lauryl sulfate	**47.0**
Perfume	**1.0**

II

Saponin	**15.0**
Sodium lauryl sulfate	**82.0**
Perfume	**3.0**

LOZENGE BASE: I would appreciate your sending me information on the composition of a lozenge to be used by diabetic patients. My active ingredients are: benzocaine, ammonium chloride, terpin hydrate. The base should have a pleasant taste, dissolve in a short time, and not be a carbohydrate. Chicago.

I would suggest that you try a gelatin or agar base, flavored with a little oil of peppermint and perhaps sweetened with a little saccharin. A small amount of glycerine may be used to plasticize the base but an excess of glycerine should be avoided, since it provides calories. Bases of this sort have been used to make penicillin lozenges.

ESSENCE BOUQUET PERFUME: I am interested in developing a perfume to depict the city of Victoria, British Columbia. On reading information gathered to date, it is learned that the favorite perfume of Queen Victoria was 'Ess Bouquet. I would like to obtain the formula for this perfume. New York.

I have no way of knowing the composition of Queen Victoria's favorite perfume. However, a check of the literature indicates that 'Ess Bouquet might refer to essence bouquet. As given by Poucher, the British authority on perfume, essence bouquet consists of:

Petitgrain oil	**160**
Sweet orange oil	**160**
Rose, No. 1092	**140**
Jasmin, No. 1054	**130**
Lavender oil, French	**120**
Lemon oil	**80**
Neroli, No. 1081	**80**
Rose oil, Bulgarian	**25**
Thyme oil, white	**25**
Palmarosa oil	**20**
Clove oil	**20**
Cassia oil	**20**
Musk extract, 3 per cent	**20**

Perfumer's Shelf

Mechanism of Scent

In a critical review of the recently published literature on the physiologic mechanism of scent, T. Salvato (ION, Nov. 1948, p. 727) pays particular attention to theories based on physical or chemical action. He believes that there is a basis for combining Tendt's physical theory with osmo-chemical considerations in the following form: 1. The odorous substance or perfume must be volatile, that is, at room temperature possess an appreciable vapor tension. 2. It must be slightly soluble in water and oils or fats. Such solubility need not be considerable. As a matter of fact, geraniol, one of the strongest perfumes, may be regarded as slightly soluble in water, because, when stirred up with water, this latter, after decanting the oily top layer, retains a definite odor of rose. 3. Since there is an additional reaction taking place between the odorous substances and the lipoids of the nasal mucous membrane, it is essential that the molecular structure of the compound concerned should be unsaturated; or have double or triple bonds; or atoms with partial valencies so that the molecule can fix new chemical elements or groups.

Salvato points out that despite the very considerable amount of research on the relation between scent and chemical constitution, comparison of one scent with another or of different strengths of the same scent is a complex matter. According to the osmo-chemical theory, strength of perfume depends on emission of particles, and this in turn depends on physical factors, particularly temperature and vapor tension governed thereby. For example, in comparing the smell of musk with benzaldehyde (bitter almonds), the boiling point of the latter is 179°C. and of the former 290°; so that comparisons at equal temperature are misleading or valueless. Only very approximate methods can be used for such comparisons. A much more important consideration is the subjective nature of the smelling faculty. It differs widely in different persons, and especially between the perfumery expert, trained and experienced in detecting slight differences both in odors and the strengths thereof, on the one hand and one untrained in olfactory phenomena. Further, the acuteness of smell for a certain odor may become wearied and deficient by excessive use with that particular odor, though, in respect to other odors, there is no such weakening. Even the finest instruments for detecting or discriminating odors—olfactoscopes, etc.—are liable to variation in results through this factor.

Nevertheless, the human nose is an indispensable aid in any valid judgments of perfumes, and must, of course, supplement chemical analysis. For example, chemical analysis alone would indicate that lavender oils with analogous physical properties and the same content of linalyl acetate should have much the same kind and degree of perfume; but as is well known this is by no means the case. Again, Japanese *Mentha piperita* may have a higher content of menthol than English, French, or other peppermint oils, but is yet less esteemed than these latter.

Discoloration from Perfume

In his talk before the Scientific Section of the Toilet Goods Association, R. J. Huttleston discussed perfume ingredients which cause discoloration is cosmetics and soap. He pointed out that the danger of discoloration from perfume ingredients is largely confined to cosmetic products which are slightly alkaline such as toilet soaps, stearate creams, soap shampoos and bath salts. Traces of alkali promote atmospheric oxidation of some of the less stable perfume ingredients and dark colored products may be formed. In addition, any perfume oil contains a great variety of reactive compounds offering many opportunities for condensation reactions. A trace of free alkali acts as a catalyst for such reactions and the products are likely to be highly colorful.

The aldehydes, a class of compounds which includes some of the most valuable perfume materials, are perhaps the greatest trouble-makers in alkaline products. In addition to being easily oxidized, substances containing an aldehyde group undergo various condensing and polymerizing reactions in the presence of alkali which result in loss of the odor and the formation of colored products. Cinnamic aldehyde, citral, heliotropin and vanillin are among the aldehydes which frequently cause discoloration. Thus, the source of many difficulties with discoloration in the perfuming of alkaline cosmetics can be traced to vanillin. The molecule of vanillin contains an aldehyde group as well as a phenolic group and is consequently very reactive. Vanillin is sensitive to light and darkens more rapidly in the presence of alkali. It is also sensitive to traces of iron. Ethyl vanillin, a compound in which the methoxyl group of vanillin is replaced by ethoxyl, also darkens in alkaline media but as it has a more powerful odor than vanillin it can be used in smaller quantities. Heliotropin is another crystalline aromatic aldehyde which frequently causes discoloration in creams, creamy lotions and soaps. Its sweet cherry-pie odor serves as the basis for heliotrope perfumes and for sweetening many other types of perfume. When heliotropin is exposed to light and air it turns reddish brown and the discoloration is increased in the presence of alkali.

Huttleston also notes that carnation perfumes, which are based on eugenol and isoeugenol, can be used only in colored soaps. Coumarin gradually develops a yellow color with the formation of odorless dihydrodicoumarin under the influence of light and atmospheric oxygen. Jasmine and neroli perfume compounds are likely to cause strong discoloration in creams and soaps unless they are compounded specifically for resistance to alkali. He likewise observes that Methyl anthranilate, which contains a primary amino group, condenses with aldehydes and ketones in the presence of alkali to yield the products known as Schiff's bases. The combination of methyl anthranilate with vanillin, ethyl vanillin or heliotropin yields bright yellow products which often turn brown in sunlight. The synthetic musks, which are aromatic

compounds containing two or three nitro groups, sometimes develop color in the presence of alkali. This seems to be due to incomplete purification.

However, in concluding, Huttleston stresses the fact that most of the alcohols are resistant to alkali and they often make up the bulk of a perfume compound. The substances which do cause discoloration may not be harmful if they constitute only a minor proportion of the composition.

Brazilian Sassafras Oil

A comparison has been made by M. J. Hickey (*J. Org. Chem.* 13:443, 1948) between American Oil of sassafras, officially recognized in the U. S. P. XIII, and a Brazilian oil commonly called *Ocotea cymbarum* or *Ocotea Pretiosa*. The freshly distilled oil was found to have the following properties:

Specific gravity	**1.076**
Index of refraction	**1.5350**
Specific rotation	**-1.42°**
Congealing point	**9.0°C**
Acid number	**0.3**
Ester number	**5.0**
Ester number, after acetylation	**9.0**

The oil is soluble in two volumes of ethyl alcohol at 20°C. and opalescent in 10 volumes. Aldehyde content, calculated as furfural, was less then 0.1 per cent.

By fractional distillation the following components were identified (for comparison the amounts in the U. S. P. oil are stated in parentheses); the quantities being given in per cent: safrole 92.9 (80), alpha-pinene 0.7 (less then 10), phellandrene 0 (less than 10), d-camphor 0 (6.8), eugenol 0.6 (0.5). In addition the Brazilian oil contained 0.17 per cent of furfural, 0.21 per cent of ciniol, plus sesquiterpenes, high-boiling matter and residue, amounting to about 5.1 per cent optically active compounds in the Brazilian oil were levo-rotary, but those in the American oil were dextro-rotary.

Determining Methyl Anthranilate and Indole

A new method for determining methyl anthranilate and indole in essential oils has been given by A. Maurel (*Chem. anal.* 31:31, 1949), as follows: Shake 2 Gm. of oil with 10 ml. of 20 per cent ethyl alcohol for ten minutes. Centrifuge to break the emulsion. Pipet off the clear alcohol solution and wash the other layer with a little alcohol. Transfer to a 50-ml. volumetric flask and, if cloudy, add a little 95 per cent ethyl alcohol. Dilute with 40 per cent alcohol to the mark. Take an aliquot for the anthranilate determination. Diazotize at the boiling temperature with 1 ml. of 1 per cent sodium nitrite and some glacial acetic acid. After ten minutes, add 1 ml. of an ammoniacol, saturated solution of R acid. Compare the reddish orange color with that of the standards. To determine indole, take another 10-ml. aliquot and add 4 ml. of Erlich-Kovacs reagent (para - dimethyl - aminobenzaldehyde) and after fifteen minutes compare the reddish orange color with that of the standards.

Volatile Oil of Mentha Cardiaca

The plant, *Mentha cardiaca* Gerarde, commonly called Scotch Mint and Little Leaf Mint, is a perennial *Labiatae* resembling *Mentha spicata* in structure and odor. The fact that it was observed to produce a volatile oil in a high percentage and that the volatile oil resembles spearmint oil prompted the study reported by K. D. Ballentine and A. E. Schwarting (*J. A. Ph. A.*, Scient Ed. 38:241, 1949). They note that the available literature disclosed no chemical or histological investigation of the plant. The plant is tall and erect with pubescent stems and leaves. The leaves are petiolate, unequally serrate, oblong-to-ovate-lanceolate with an acuminate apex. The leaf color is somewhat lighter green than that of spearmint, and the purple color which often appears on the basal stem of spearmint is not observed on *M. cardiaca*.

In the study made by Ballentine and Schwarting the plants collected in mid-morning were allowed to wilt in the field and distillation was initiated immediately and continued until all material was distilled. The aqueous waters were subjected to cohobation processes in a separate still and the oil collected. The oils were not mixed. Each was dried, filtered, and stored in tightly stoppered and filled containers. The total oil content of *Mentha cardiaca* was 0.477 per cent. The volatile oil was red-brown in color with a sweet spearmint-like odor. The cohobated oil was amber colored and possessed a similar odor. The latter oil made up 8 per cent of the total oil yield.

A study of the physical properties and the chemical composition of the volatile oil samples gave the following averages:

Specific gravity	**0.9128**
Specific rotation	**–69.85**
Index of refraction	**1.4871**
Ketones	**57 per cent**
Acid number	**0.556**
Esters (calculated as linalyl acetate)	**5.6 per cent**
Alcohols (calculated as linalool)	**3.5 per cent**
Phenols	**none**

The same determinations for the cohobated oils gave the following figures:

Specific gravity	**0.944**
Specific rotation	**–56.91**
Index of refraction	**1.4925**
Ketones	**84 per cent**
Acid number	**1.005**
Esters	**6.7 per cent**
Alcohols	**6.6 per cent**
Phenols	**none**

Palestinian Grapefruit Oil

During the past few years, a number of essential oils produced in Palestine have been examined in the Imperial Institute in London. Recently H. T. Islip & F. Major (*Bull. Imperial Inst.* 46:215, 1948) examined a sample of grapefruit are produced from the 1948 crop in Palestine. Their examination yielded the following data:

Specific gravity (at 20°C.)	**0.8574**
Optical rotation	**+93.02**
Refractive index	**1.4770**
Aldehydes, as octyl and decyl	**1.0 per cent**
Non-volatile matter	**7.9 per cent**

These data reveal that in the sample of Palestinian grapefruit oil the physical and chemical constants are in fair agreement with the corresponding ranges of figures found by Nelson and Mottern for Florida machine-expressed grapefruit oil, except that the amount of aldehydes returned as octyl and decyl is low. The specific gravity and optical rotation of the sample fall within the ranges for the six commercial samples of Florida oil, the refractive index is only a trifle higher and the non-volatile matter is approximately the same as the amount of waxy materials found by Nelson and Mottern in a single sample of Florida grapefruit oil. Though still considerably lower than the lowest figure quoted by Nelson and Mottern the amount of aldehydes present is a considerable improvement on that found in the previous sample of Palestinian grapefruit oil.

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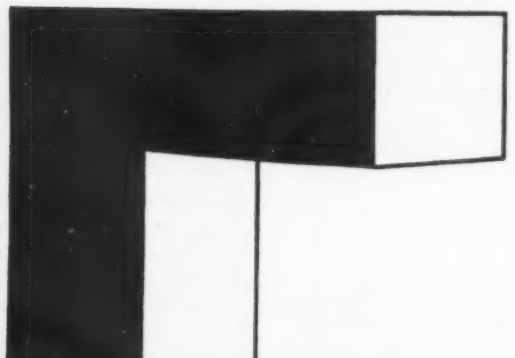

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Abreast of the Markets

Alcohol Price Advance Features Fine Chemical Market. Lanolin Up Two Cents In Stiff Crude Market.

Most large volume items in the drugs and fine chemicals market held at firm price position, but there were price changes on some drug products. Of outstanding importance was the announcement of an increase in alcohol prices effective as of July 1st. Lanolin advanced 2c per pound, castor oil declined ½c per pound. After reaching a high of $11.75 per pound outside, menthol eased slightly to a current range of $11.15 to $11.25. Ammonium salts maintained a firm price position as did the amino acids. There was a softening action in the benzoic acid and sodium benzoate markets in which quantity prices were eliminated and quantities of 100 pounds or more could be had at the former price of ton lots only. On less than ton lot quantities this amounted to a price reduction.

Alcohol Advances

A survey of the developing price pattern on ethyl alcohols effective as of July 1st on both spot and contract delivery revealed a forthcoming uniform price structure on most alcohol formulas. The July 1 delivered price pattern per gallon based on the announced and quoted schedules of major producers is listed below. The overall industry trend with respect to price differentials is 10c per gallon for drum carlots over tanks, and the usual 4c and 5c spreads for less carlot quantities over and under 950 gallons respectively:

Formula	Price Tankcars	Dms., c.l.	Dms., l.c.l.
CDA-12	.34	.44	.48 - .53
CDA-13	.34	.44	.48 - .53
CDA-14	.34	.44	.48 - .53
SD-1	.32½	.42½	.46½ - .51½
SD-2-B	.31	.41	.45 - .50
SD-3-A	.31	.41	.45 - .50
SD-12-A	.30½	.40½	.44½ - .49½
SD-23-A	.35½	.45½	.49½ - .54½
SD-23-H	.34	.44	.48 - .53
SD-30	.31	.41	.45 - .50
SD-35-A	.33½	.43½	.47½ - .52½
SD-37-1	.57	.67	.71 - .76
SD-39-B	.39½	.49½	.53½ - .58½
SD-39-C	.35½	.45½	.49½ - .54½
SD-40	.34	.44	.48 - .53
Proprietary	.33½	.43½	.47½ - .52½
Pure, tax free	.32	.42	.46 - .51
Absolute, tax free	.37	.47	.51 - .56

While the advance in ethyl alcohol will have a tendency to firm the market for acetaldehyde, acetic acid, acetone, ethyl acetate, methyl ethyl ketone, butyl alcohol and several other chemicals, suppliers are not expected to boost prices on these items. Producers, because these chemicals are in fairly long supply and demand is below previous high levels, are more concerned with maintaining present prices than seeking increases at this time. They view the rise in ethyl alcohol as a special situation which moves producers' operations from red to black.

The most recent report of the Treasury Department's alcohol tax unit does not show any considerable increase in industrial alcohol production since the present fiscal year began in July 1948. The output of domestic undenatured alcohol for the nine months (July 1948 to March 1949) has amounted to 250 million proof gallons, as compared with 247.3 million gallons during the corresponding period in 1947-48.

Lessened industrial demands for alcohol, however, are shown in the accumulated supplies. Stocks at the end of March were 37,707,000 gallons, as compared with 29,800,000 gallons at the end of the same month last year. These figures apply only to industrial alcohol in bonded warehouses and in denaturing plants and do not supply an idea of unused alcohol in hands of consumers.

Glycerin Firm

The supply and demand relationships of this material were in normal balance. Crude material was tight and reportedly sold up through June as a result of quantities moving to Germany, but this did not create any shortage of refined material in the domestic market. The foreign demand for crude over recent months which offered an outlet at prices higher than domestic refiners would pay, accounted in large part for the abnormal price levels obtained for crude by soapers and fat splitters.

Refiners were making their material largely from their own crude and would not pay the current outside price for crude glycerin. What the crude glycerin market picture would be after the end of June, when current contracts expire, was a matter of conjecture at this time. However, it was felt with all confidence in most quarters of the industry that refined glycerin prices would be maintained at current levels for the balance of the year, unless there should be some markedly unforeseen developments occur to change the present outlook.

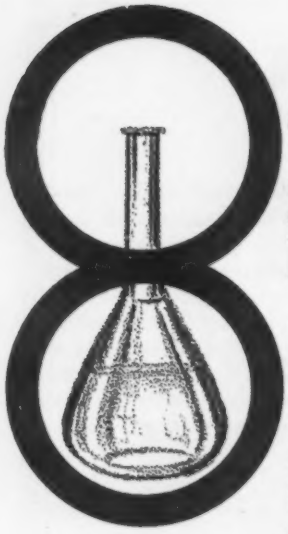
Production of natural refined glycerin is expected to decline by more than 5,000,000 pounds in July as two large refiners are planning to close down for a two weeks vacation period. However, there is likely to be a seasonal slackening in the demand from some consuming lines that normally slow down for necessary repairs during this period.

Production of synthetic glycerin, running at approximately 50 to 60 percent of capacity, is being stepped up. Some consumers have been advised to the effect that difficulties are being adjusted and that by July production should be running close to capacity.

Glycerin stocks in the Argentine are large but up to the present time there has been little inclination to release this material in the export market and it is believed that Norway, Sweden and Germany will continue to look to the United States for goods. Previous purchases for these countries have been made through the Army but future export purchases will be made through ECA.

The glycerin trade may be well characterized by a close buying caution, according to a report in "Chemicals and Drugs." Such a position is customary in the natural glycerin market due to its speculative nature. This does not apply to synthetic glycerin sales which are made on a term contract basis. This caution is reflected in the gradual downward trend of total production (approximately 500,000 pounds less in February than the previous month), and the sluggish accumulation of stocks. The foregoing position prevails in spite of the gradually increasing synthetic production which has reached a point where it may off-set the reduction trend in crude output, according to this report.

• Prices quoted in this section were current on the first of this month.



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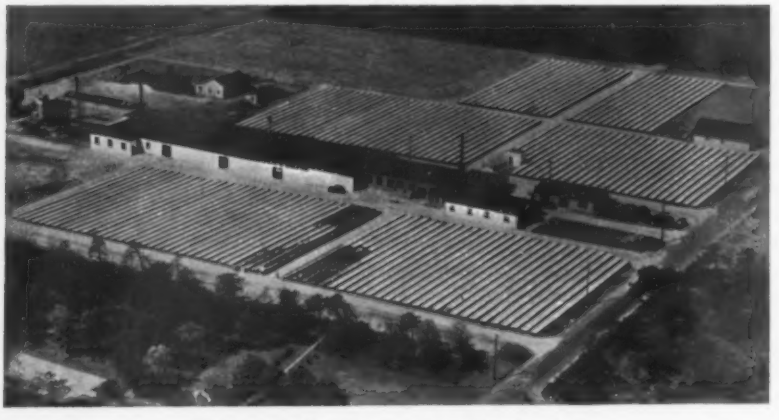

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Peppermint Oil Eases Again On Reports Of Increase In Acreage Planted. Export Market Lags.

An easier market developed in peppermint oil during the current trading period. Natural oil is now in a price range of from $5.50 to $6.35 per pound and redistilled at from $6.10 to $6.75.

The future of new crop prices would appear to be tied-in with the export market for American oil. It would appear that Britain will not be a market of free import of peppermint oil and that the best that exporters may reasonably hope for is that the British Advisory Committee may be able to persuade the British government to license further importations in excess of that which now seems likely.

Growers of peppermint for oil plant to harvest approximately 46,000 acres this year, an increase of 4,000 acres over last year and 7,000 acres above the 1938-47 average, according to the Bureau of Agricultural Economics. Of the four states growing the crop in commercial quantities, only Washington expects to harvest less acreage this year than last. Indiana and Oregon showed increases of nearly 2,000 acres each, and Michigan an increase of 1,000 acres.

Spearmint for oil will be harvested from about 17,000 acres—a reduction of a little more than 2500 acres from last year, but about 9,500 acres above average. Only Indiana and Michigan grow spearmint for oil on a commercial scale. All of the indicated reduction is in Indiana, with Michigan remaining unchanged.

Total acreage of peppermint and spearmint for oil is estimated at 63,000 acres for 1949, about three percent above last year and 36 percent above average. Mint in Michigan has been damaged to some extent by frosts since June 1.

Orange Oil Down

Sweet orange oil USP XIII California coldpressed Exchange Brand was reduced sharply during the current trading period and is now offered by this source at $1 per pound in 25 lb. cans or 385 lb. drums. This is the lowest price at which this grade of orange oil has been sold in the past ten years. Contracts up to six months are acceptable.

Citronella Firm

Ceylon citronella oil could be bought at 79c per pound although most sellers were not disposed to go under 80c. Some makers of insect repellents have been expecting a fair trade this year and have hence taken fair quantities of oil. Reports from primary markets in some instances have alleged shortage in offerings and those receiving such advices seemed to believe in the possibility of prices rising.

An association of producers of essential oils from citronella and lemon grass, known as Oficina Controladora de Aceites Esenciales, was organized in Guatemala. This organization was granted the exclusive rights for exportation of these two essential oils from Guatemala.

Essential Oils from the Orient

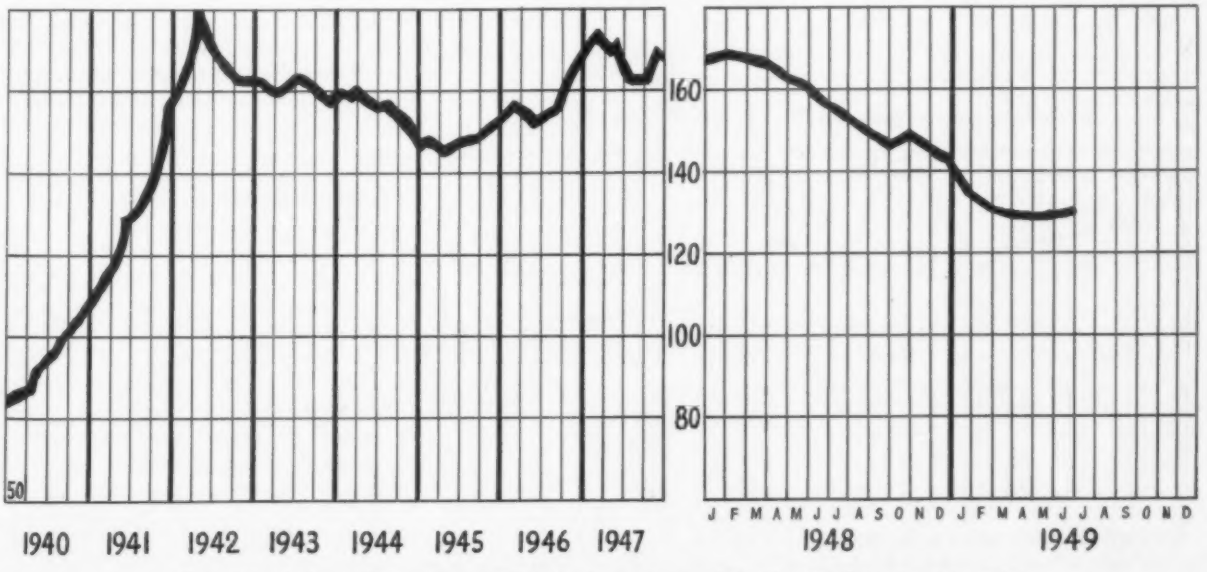
Declared exports from Shanghai, China, to the United States during the first quarter of 1949 included the following items: Peppermint oil, 900 pounds valued at $3,610; citronella oil, 15,200 pounds, $13,100; and musk, 70 pounds, valued at $9,259.

Declared exports of essential oils from Hong Kong to the United States during the first quarter of 1949 included the following types: Cassia, 11,340 pounds, valued at $16,266; aniseed, 265,320 pounds, $172,640; camphor, 4,000 pounds, $673.

Aminoacetic Acid Down

Leading producers of acid aminoacetic N.F. VIII announced a price decline in this item which places the spot market at $1.50 per pound in 100 lb. barrels, and $1.75 per pound in 25 lb. fibre drums.

50 Raw Materials—Weighted Price Index. 1926 = 100.



The Price Index of Fifty Commodities for June advanced fractionally from 129.1 to 129.9.

JUNE PRICE CHANGES

UP

Alcohol SD1 5½c
Cardamom Oil $1
Citronella oil Ceylon 7c
Isopropyl Alcohol 13c
Lanolin 4c
Lime oil Distilled $1.15
Expressed 50c
Menthol Natural $1.15
Rhubarb Root HD 10c

DOWN

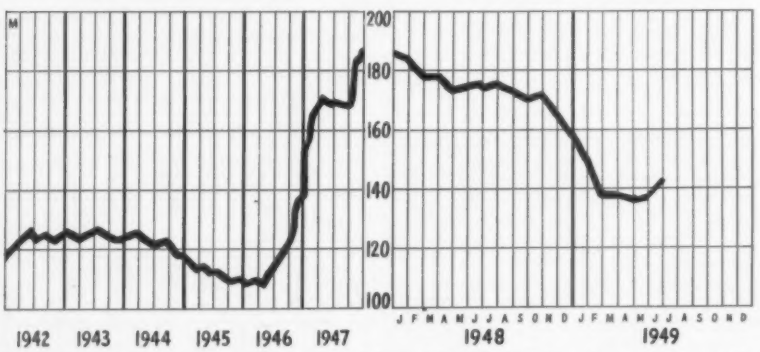
Agar 65c
Anisic Aldehyde 20c
Balsam Tolu 25c
Barberry Bark 10c
Beeswax White 5c
Bergamot Oil 10c
Birch Tar oil Rect. 10c
Cajuput oil 5c
Cantharides Chinese 1c
Caraway Oil 25c
Cedar Leaf oil 1c
Cinnamon Bark Oil $6
Coltsfoot Leaves 2c
Coriander Oil $1.50
Coumarin 25c
Eucalyptus Oil 8c
Henbane Leaves 10c
Henna Leaves 2c
Lavender Oil 5c
Lemon Oil Italian 10c
Linalyl Acetate 15c
Mercury Metal $1
Montan Wax ½c
Peppermint Oil Nat. 01c
Redist. 15c
Petit Grain Oil SA 35c
Sage Oil Spanish 35c
Spearmint Oil 5c
Spermaceti 1c
Spruce Oil 5c
Tansy Oil 75c
Thyme Oil Red 10c
White 10c
Vanilla Beans Bourbon 25c
Mex. cuts 25c
Mex. whole 15c
Wahoo Bark of Root 5c
Wormwood Oil 15c
Zinc Oxide 3c

Isopropyl Alcohol Advances

During the latter part of June all major producers of isopropyl alcohol announced price advances effective as of July 1, in which all grades were to be advanced 5½c a gallon. The new price schedule on the 91 percent grade will become 28c per gallon in tankcars, 38c in drum carlots, and 41c in less than carlot drum quantities, on a delivered basis. On the same basis, the 95 percent grade will become 29½c per gallon in tankcars, 39½c in drum carlots, and 42½c in less than drum carlot shipments. The 99 percent grade will be quoted at 31c per gallon in tankcars, 41c in drum carlots, and 44c in less than drum carlot quantities.

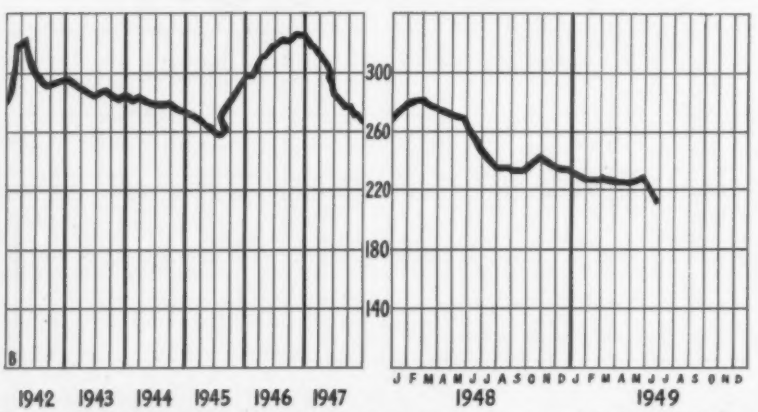
Supplies of this material were reported as adequate to meet all consuming demand. After the new higher price schedules become effective, business volume was expected to fall off sharply for a couple months, since purchasers have been alert to load up with heavy inventories at the low price, having realized that the price would eventually be advanced with the price of ethyl alcohol. The price of isopropyl acetate was not advanced accordingly.

15 Medicinal Chemicals—Weighted Price Index. 1926 = 100.



The medicinal chemicals index advanced from 139.5 to 143.9. Alcohol and menthol were sharply higher. Mercury declined.

15 Botanicals—Weighted Price Index. 1926=100.



The botanicals index declined from 226.8 to 217.3. Agar, and Balsam Tolu were sharply lower. Rhubarb advanced.

Lanolin Up

Lanolin was advanced in price in a strong market. Cosmetic grade lanolin was 2c per pound higher, being quoted in the range of 30c to 32c per pound. The pharmaceutical grade was listed at 29c to 30c per pound, and the technical material was quoted at 28c to 28½c per pound.

The supply situation was still tight, due to the low volume of wool scouring operations from which degras crude is obtained. However, there was more degras being imported over recent weeks than heretofore, and this tended to relieve to some extent the critical supply situation. The feeling was expressed that for the balance of this year lanolin would remain in a generally short supply position and that prices would be unlikely to show much softening. There was some increase in wool scouring expected to develop this fall which would tend to ease the supply position somewhat.

Cod Liver Oil Outlook

Norway's exports of all types of cod liver oil increased in 1948 by 24 percent over the total for 1947. The large increase in exports was mainly in pale cod liver oil, waste oil and grakse. Steamed medicinal cod liver oil exports declined in 1948 as did the industrial oils. Exports of steamed medicinal cod liver oil have remained at a relatively high level for the past 3 years. In 1948 the United States was the heaviest taker of this oil.

The present export price of medicinal cod liver oil is $67.50 per 30 gallon drum, c.i.f. east coast of the United States. The price last year of $73.50 was increased on July 12, 1948 to $77.00 and on January 20, 1949, reduced to the present price. It is understood that the Government export tax on this price is about 50 Norwegian kroner or approximately $10 per drum. The present government fixed price to the producer of medicinal cod liver oil is 210 Norwegian kroner or about $42.47 per barrel of 107 kilograms, f.o.b. Lofoten district and 205 Norwegian kroner or $41.46 for Finnmark district.

The outlook for the 1949 production of cod liver oils is not promising. The catch for the first 3 months of the season was reported to be about 12,000 short tons under that for the same period last year. It is anticipated that there will be fewer cod along the coast of Norway and efforts are being made to extend the fishing further afield, principally near Greenland. It has been decided to expend considerable funds on the purchase and equipping of additional trawlers and larger fishing boats.

The increased use of trawlers has been opposed by many persons as being uneconomic since it results in indiscriminate catching of all types and sizes, thereby possibly depleting the supply of cod. Experiments conducted in the Lofotens with a new type of dragnet have so far shown promising results. Since 1947 the Government has been marking fish and reports of the markings made in 1947 and 1948 are beginning to be received principally from the Lofoten district. It is hoped in this way to follow the movements of the fish and so increase future fishing possibilities.

Crude Drugs

Collection activity in the domestic crude field is developing slowly, according to reliable trade sources. Industrial projects with their higher remunerative return during the war and postwar years are gradually thinning their lists of employed. Whether these former industrial workers can be enticed to return to the collection of botanicals at present-day prices remains to be proved.

Botanical arrivals from overseas aggregated nearly 1¼ million pounds in February, a 27 percent increase over the preceding month. The increased tonnage represented expanded arrivals of roots, barks, and flowers, and drugs of vegetable origin.

Ergot Strong

Short stocks of ergot, strong prices, and inconsequential competition continued to picture the spot position of this item. Quotations lack change. March imports totaled 35,840 pounds from Portugal.

A report on ergot production in India states that since 1943, when the Agricultural Department of the Government of Madras, India, first inaugurated a plan for increased production, 5,745 pounds have been collected. Because of restrictions on imports of drugs, the Agricultural Department extended the plan for 3 more years after April 1949.

Small growers in the Nilgiris, the area selected for carrying out the plan, are encouraged to collect the substance, $3.23 being paid for 1 pound of dry ergot. Free cultures are provided for the propagation of the fungus.

The Director of Agriculture in Madras stated that in 1944-45 the alkaloid content of locally produced ergot was slightly more than 0.20 percent, while the British Pharmacopoeia standard reportedly is 0.19 percent. In 1948, however, the alkaloid content of ergot produced in the Nilgiris was 0.39 percent, and currently, as a result of careful research by the Agricultural Department, the alkaloid content has risen to nearly 0.45 percent under controlled conditions.

Coumarin Prices Reduced

Coumarin was reduced 25c a pound by the Monsanto Chemical Co., thereby establishing the firm's price at $2.75 per pound for 25 pound packages or more. Five pound packages are now available at $2.80 while single packages in five pound lots are available at $2.90 per pound.

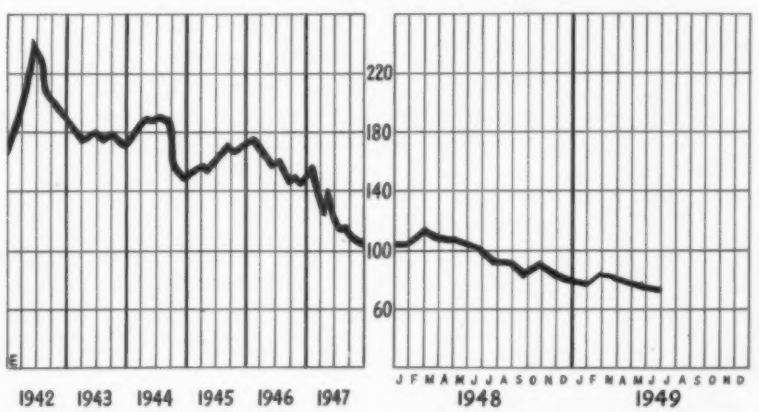
Coumarin goes into the manufacture of tobacco, perfumes, soaps and food flavors. The reduction marks the first change in price since March, 1948, and is made possible by savings realized in production. Production of synthetic coumarin has been running at the rate of around 509,000 pounds annually.

Mercury Soft

Locally the situation in mercury displays a soft tone. Openly quoted prices range from $80 to $85 per flask but it is intimated that the inside price might be shaded by $1 per flask on an order for a round quantity. Stocks held here are substantial in view of the record imports of metal noted over the latter part of last year.

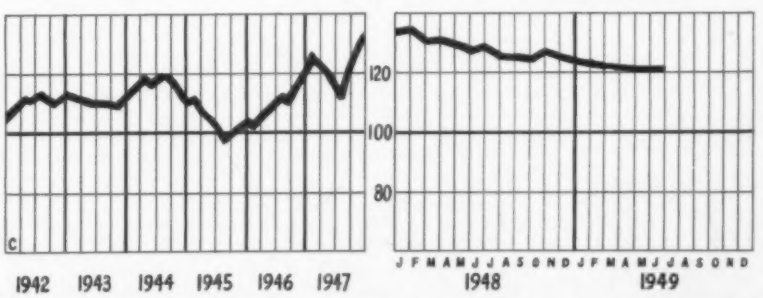
The arrival of 17,000 flasks of mercury at Philadelphia during the current trading period represents one of the largest single shipments to arrive here in the history of the industry. The metal, coming from Italy, is for Government use. About the second largest purchase of foreign metal was a few years ago and amounted to about 10,000 flasks for the account of a single consumer, but the arrivals against this purchase were spread over an extended period.

15 Essential Oils—Weighted Price Index. 1926 = 100.

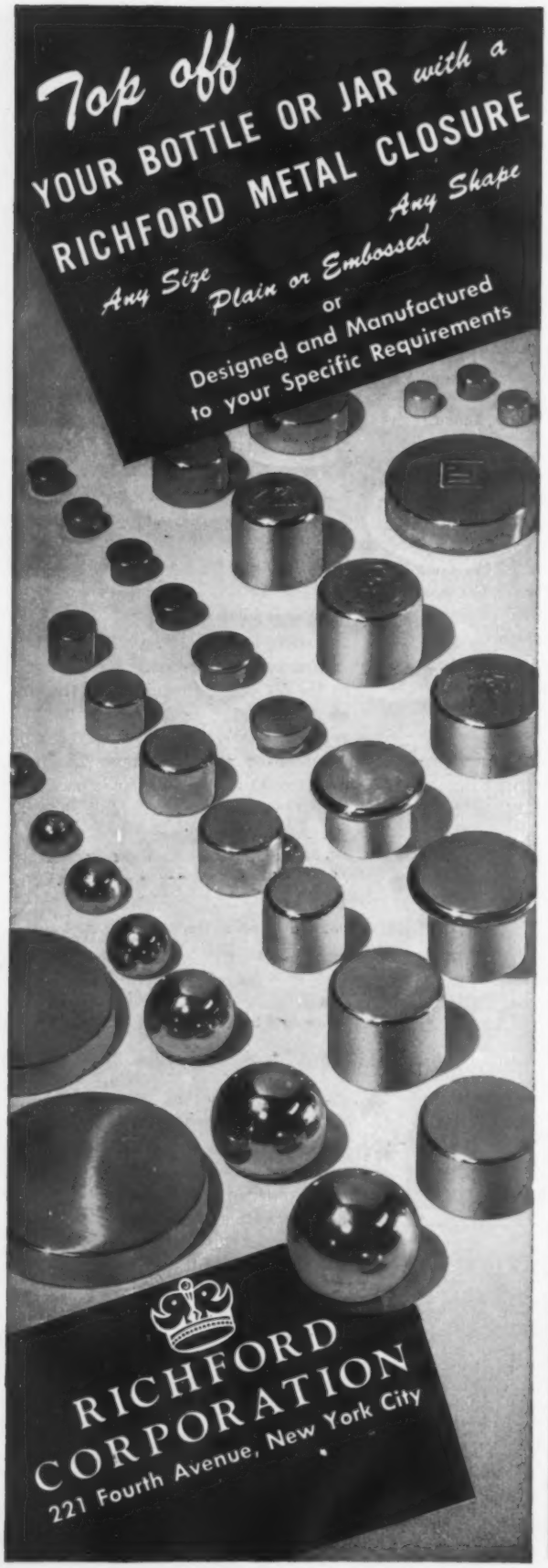


The essential oils index declined from 83.6 to 81.1. Bergamot, eucalyptus, lavender, lemon, and peppermint were lower. Citronella and limes were up.

25 Cosmetic Raw Materials—Unweighted Price Index. 1926 = 100.



The cosmetic raw materials index declined from 122.4 to 120.7. Balsam Tolu, Beeswax, candelilla, spermaceti and zinc oxide were lower. Alcohol, lanolin, and menthol advanced.



Mandelic Acid

(*Continued from page 91*)

Proteus infections. They have the further advantage of being effective within the tissues as well as in secreted urine. However, the possibility of undesirable side effects may be greater than with mandelic acid and some investigators are of the opinion that where mandelic acid offers equal therapeutic promise, it should be preferred to the sulfonamides.

Penicillin

Penicillin is active against gram-positive organisms and as the majority of urinary tract infections are caused by gram-negative organisms, it is of little therapeutic value in these conditions. It is, however, useful in treating those are urinary infections caused by Staphylococci and Streptococci.

Streptomycin

Streptomycin is effective against most gram-negative organisms and also many of the gram-positive organisms, in alkaline urine. The results of in vitro experimentation with streptomycin are very promising. Its use in the clinic, however, is limited by certain disadvantages. Among these are its relatively high cost, the necessity for injection, the risk of side effects, and finally the fact that many organims tend to develop resistance.

Choice of Urinary Antiseptic

In his recent book, Dowling[17] has conveniently summarized the recommended treatment for infections of the urinary tract as follows:

	Drug Recommended	
Causative Organism	First Choice	Second Choice
Escherichia coli *Aerobacter aerogenes* *Alcaligenes faecalis* *Pseudomonas aeruginosa* Paracolon bacilli Other gram-negative rods	Sulfonamides or Mandelic acid	Streptomycin
Proteus vulgaris	Sulfonamides	Streptomycin
Streptococcus faecalis	Penicillin	Mandelic acid
Other nonhemolytic (alpha and gamma) *Streptococci* *Streptococcus haemolyticus* *Staphylococci*	Sulfonamides or Mandelic acid	Penicillin

From Dowling (17) reproduced by courtesy of W. B. Saunders Co.

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Miss Catherine F. Sullivan provided bibliographic assistance.

A.M.A. Cosmetic Rules

(*Continued from page 41*)

should be sold and watched. All sales persons should be instructed to report complaints.

12. The name of the firm that is responsible for the finished article as labeled.

13. The names of the manufacturers of all ingredients contained in the article.

14. A statement of the laboratory and control personnel of the firm responsible for the formulation and control of the product.

In some instances it will be unnecessary to supply in detail all data listed in the Outline of Presentation of Submitted Product, if there is sufficient information available in general knowledge pertaining to the products or their ingredients. However, each submitted product must be given individual consideration.

Decisions of General Interest

"*Hypoallergenic.*"—The committee will permit the use of the term "hypoallergenic" when it is applied to products that will meet the Committee's definition for this term. The Committee has defined "hypoallergenic" to mean that every possible care has been taken in formulation and production to insure minimum nstance of allergic reaction. In evaluation of products so abeled, the absence from the formula of common allergens and

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IODOXYQUINOLIN SULPHONIC ACID
NEO CINCHOPHEN
OXYQUINOLIN BENZOATE
OXYQUINOLIN SULPHATE
POTASSIUM OXYQUINOLIN SULPHATE
PHENOBARBITAL
PHENOBARBITAL CALCIUM
PHENOBARBITAL SODIUM
PENTOBARBITAL SODIUM
THEOPHYLLINE

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the special selection and purification of ingredients should be the basic criteria. Manufacturers of hypoallergenic products should be prepared to offer clinical data to support the claim.

Definition of "Cosmetic."—For purposes of determining what products come within the purview of the Committee on Cosmetics, a cosmetic has been defined by the Committee as "a preparation which is applied to the skin or its appendages in order to alter its appearance, to protect it, to beautify or to promote attractiveness."

Variation from Standard Formulas.—If a submitted preparation consists of a standard formula (from which minor or insignificant deviations would be permitted) it is unnecessary for the manufacturer to submit data which could be obtained only at considerable expense when it would do nothing except support facts already well known in literature or elsewhere. On the other hand, when new ingredients are included about which there is insufficient information, or when formulas vary in such a way that an entirely new response may occur, it is necessary for the manufacturer or the submitting distributor to supply adequate information to prove the usefulness and safety of the preparation and to defend the claims made for it.

Compliance with Laws.—A declaration by the Committee that submitted formulas and advertising are acceptable merely means that compliance with the Committee's rules has occurred and does not indicate that the copy has been reviewed from the legal standpoint to determine whether it conforms with state and federal laws, this being the responsibility of the interested manufacturer or distributor.

Terms and References Not Recognized.—The Committee will not recognize the use of such terms as "nonallergic," "tissue cream," "hair tonic," "scalp tonic" and "cure." Nor will it recognize a reference to ailments or symptoms of disease, appeals to fear or any other technic whereby the purchaser is misled into accrediting unusual properties or significance to cosmetic products because of stated or implied misrepresentation in advertising material.

The Committee will not recognize disparaging references to competing products. Nor will it recognize references to doctors and hospitals, unless such reference is based on work consisting of controlled scientific data and is offered with full knowledge and consent of all interested parties.

Use of Seal of Acceptance.—Articles that are accepted by the Committee will be eligible for advertising with the Committee seal as long as the claims offered for the products remain acceptable to the Committee.

The Committee seal may not be used for a line of products unless all the products in that line are accepted, nor for a house or organization, the seal must be reserved for products.

The seal or reference to the Committee on Cosmetics should not be used in any way that detracts from their dignity.

Advertising.—Since all advertising for accepted products must conform to the claims recognized by the Committee on Cosmetics, advertising should be forwarded to the office of the Secretary of the Committee, American Medical Association, for review prior to release. Submission of such copy in manuscript form frequently will prevent waste of expensive type or plates when conflicts with recognized claims are discovered.

Up-To-Date on Hormone Creams

(Continued from page 32)

Professor of Pathology at Temple University, Philadelphia, made the following significant statement: "There can be no question that this hormonal agent, when applied to the epithelium of patients in the postmenopausal group, showed striking changes, with a revision toward the normal picture."

An excellent summmation of these several studies was given by Davis[9] in his presidential address to the Tri-State Medical Association. Here he said: "There have been numerous well controlled experiments using hormone creams in which the same cream without the hormone was used on the corresponding opposite side of the body. The general results were as follows:

1. The skin became smoother.

2. The number and size of the capillaries were increased.
3. The elastic fibrils became more numerous.
4. Senile pigmentation and freckling were diminished.
5. There was evidence of regeneration of surface epithelium, with an increased water content of the estrogen-treated areas.
6. The topical use of estrogens produced a greater effect on the skin than therapeutic doses given orally."

Information has also been obtained regarding the possible systemic effects of applying estrogen-containing cosmetics to the skin. Taking the pharmacological facts into consideration, Goldzieher[11,12] has pointed out that it seems that not more than one tenth to one seventh of the estrogen administered by inunction becomes available for systemic purposes. Thus if two ounces of a cosmetic cream containing a total of 15,000 international units of estrogen is applied to the skin for a 30-day period, the daily application contains 500 international units. Of this only from 50 to 70 international units are resorbed and become available for systemic purposes. "This amount," says he, "is truly negligible."

Citing his own extensive experience with the use of estrogenic creams, this authority stated that he did not know of a single case where there was interference with the menstrual function nor any instance where any woman has been caused worry or other discomfort. In his practice he has made many vaginal smears and in no case did he observe any vaginal smear reaction after the prolonged use of estrogens in cream.

A direct clinical approach to the question of systemic effects from hormone creams was made by Eidelsberg.[13] Using a cosmetic cream containing 7,500 international units per ounce he made a study of the effects of estrogen, administered by inunction, on the estrogen content of the wine and on the histological picture of vaginal smears. A total of 14 patients were studied, ranging in age from 18 to 56 years. Four untreated controls were also used.

From his studies Eidelsberg was able to report that the fluctuations in estrogen excretion in the controls and in the 14 patients during the use of the estrogen creams by facial inunction were similar in pattern and did not differ materially in amount. Likewise, their vaginal smears appeared to show no significant alteration in cytological cycles. Therefore, concludes this investigator, in the amounts used (3,750 international units per week) and by the method applied, the estrogen cream does not appear to produce any systemic effect.

A similar conclusion was reached by Eller and Eller[5] who included a study of systemic effects of estrogens as part of their comprehensive study. Their examination of vaginal smears showed that the estrogens absorbed from the several ointments were of negligible effectiveness, even on the vaginal epithelium. Of course there were no mammary or other systemic

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•

It has long seemed that Washington was operated by mechanical brains, with stripped gears. Witness the case of David Lilientahl's critics: Senators who couldn't split an infinitive without a legal staff would have you believe they can split an atom by themselves.

•

But some of the fanciest "thinking" is being published these days under the aegis of the American Medical Association in its fight against the President's National Health Program. In their latest brainstorm, the physicians insist that a hypochondriac isn't really sick. Just wait 'til the M.D.'s start telling that to their psychiatrists!

•

While the National Association of Manufacturers fancies there's a Red under every bed, the more specialized AMA sees a Socialist under every bedpan. Following in the tribulations (if not the footsteps) of FDR, Truman is now fighting Martin, Barton and Fishbein.

•

Sometimes the good doctors sound like they're putting the needle into the wrong arms—their own. Some of them, who don't know the differences between a fatty acid ester and a ten-day diet, now want to counsel the Cosmetic Industry.

•

To be altogether fair, they don't really want to run the Cosmetic Industry. One can only presume they want to be sure that exotically labeled perfumes don't stimulate the V.D. rate.

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The Cosmetic Industry doesn't fear the High Principles of the AMA so much as it suspects a High Colonic.

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estrogenic manifestatons, since these tissues are less sensitive than the vaginal epithelium.

Thus, as remarked by Davis,[9] it is very clear that the amount of estrogen absorbed from the local application of hormone creams is far below the level required to produce any systemic effect. However, from the data presented above, there is an abundance of evidence that the application of hormone cream does produce a definite local effect.

Although this point has already been discussed previously, it might be well to consider further the question of estrogenic creams and carcinagenisis or other harmful effects. For example, Davis[9] has said that regardless of the concentration of estrogen used in a cosmetic cream, it has never produced a case of human cancer. This is very much in line with the statement made by Klarmann[14] in his review on the hormone creams. Here he emphasized that no case of human cancer has ever been definitely connected with the use of estrogens in any concentration.

On more than one occasion, Goldzieher[10] has stressed that there is no foundation for the view that the topical use of estrogen creams may be carcinogenic. At the Louisiana hearing,[12] at which he served as an expert, he said that in view of the facts, he is quite convinced that humans will not get cancer through the use of estrogens.

At the same hearing, Klarmann introduced a letter from Dr. Louis Schwartz of the U. S. Public Health Service. This letter said, in part, "that the Section of Dermatoses Investigations has no record of skin damage resulting from the use of hormone creams. Neither am I aware of such skin damage having been reported by others."

Of very pertinent interest are the findings of Eller and Eller. Noting that the question of the relation of malignant changes to sterols has been prominent in the literature, they paid particular attention to the cytolgocial character of the epidermal cells of the patients showing a response to estrogen inunction. They state unequivocally that no abnormalities were observed. There was no increase in the number of mitoses, or any suggestion of changes other than those of simple regeneration.

Worthy of more than passing mention is the fact, as stressed by Davis, that cases of pigmented senile hyperkeratosis, which are classified with precancerous lesions of the skin, have been favorably influenced by estrogens. In some cases prolonged topical application has been followed by complete regression. Of kindred importance is Goldzieher's[11] observation to the effect that it is quite likely that the pharmacological effects of estrogens might be applicable to the correction of patho-changes of the skin other than those directly referable to estrogen deficiency.

It might also be stressed that there are many groups which are quite capable of giving unbiased opinions when presented with the facts on estrogen-containing creams. Prominent among these groups are those comprising various state boards of health. A case in point

is the New York State Board of Health which had started to prepare restrictions on hormone creams. However, when evidence was produced to show that the creams were harmless, the restrictions were withdrawn. In Virginia and Kentucky, the restrictions on the sale of hormone creams were rescinded on presentation of the facts to the authorities.[12] The same thing happened, of course, in Louisana.

The revised Louisiana regulation reads as follows: "No cosmetic or beauty preparation containing as one of its ingredients estrogenic hormone, or any of its chemical derivatives, or any synthetic chemical product possessing properties similar to those of estrogenic hormone, may be manufactured, processed, packed, sold or distributed in Louisiana unless its label bears adequate directions for use and a statement of the quantity in units of such ingredient contained in each ounce of such product."

Before concluding it may be mentioned that research is now going on with respect to the effects of topically applied materials other than estrogens. If the current studies fulfill their promise, the cosmetic industry can expect some really interesting developments.

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Proprietary Association

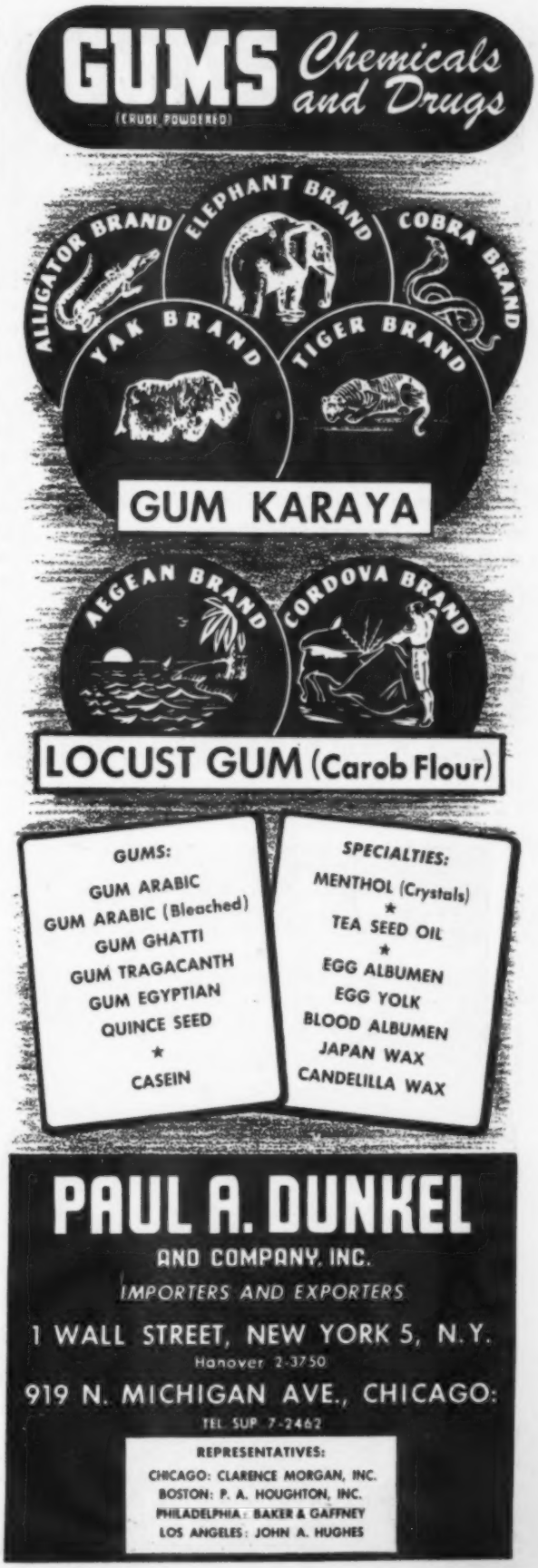
(Continued from page 29)

distribution of medical services, there will inevitably follow an expansion and wider distribution of retail drug stores. For the druggist follows the doctor, and he sets up his shop in those areas where the doctoring business is good.

"If any sales manager, of any manufacturer here represented, were to find himself suddenly able to open up several thousand more retail outlets for his products, he would probably leap over his desk with excitment. But that, in effect, is precisely what national health insurance will do for the drug industry. For the doctoring business is going to be good all over the country.

"Please don't take me too literally on these figures. What I *am* trying to say is, there will inevitably be millions of more customers who are being educated in the subject of health and who will be in the market for your products. And if that doesn't offer the opportunity for a large and profitable expansion of your industry, I don't know what will.

"As to all the propaganda being launched in your direction to persuade you that national health insurance means government regimentation and control of the drug industry, I ask you simply, how can it? So far



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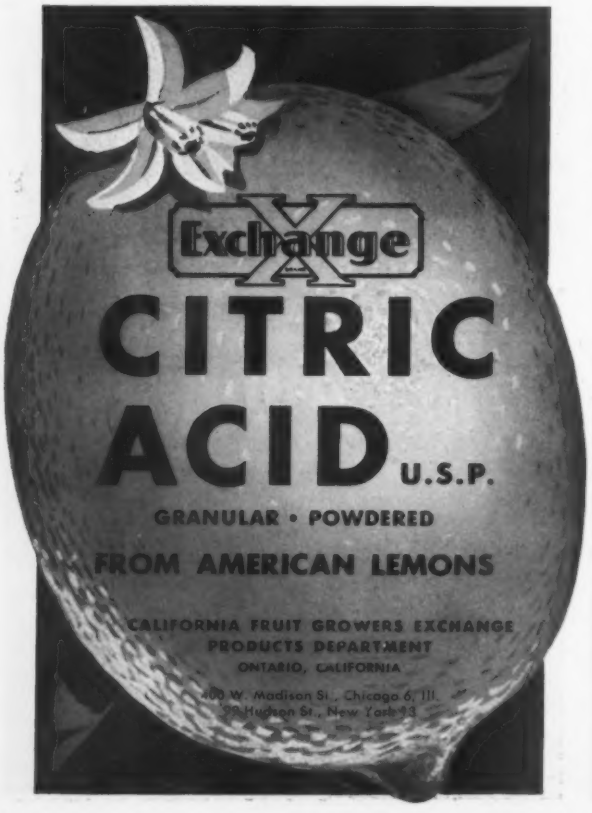

as you are concerned, you will, to all intents and purposes, continue to do business precisely as you do today. And, as I have said, you will sell more goods. There will be no attempt—and I underscore this statement—to tell anybody—druggist or manufacturer—how to manage his affairs."

Dr. John W. Cline, of San Francisco, a member of the Coordinating Committee of the A. M. A., defended the present system of medical practice and attacked the Truman Plan as socialized medicine and part of the welfare state. He claimed that it would create a tremendous new bureaucracy, pointing out that the German scheme employed one person have nothing to do with medical care for each 100 insured people.

John McPherrin, editor of the American Druggist, reported on his recent trip to England to study the plan operating there. He said that the rank and file in England seem to like socialized medicine but have not come to any realization of its cost, either in terms of money or quality. Still more important, he added, is the cost in terms of debilitation of the nation's moral fiber and strength, health insurance forming only a part of a general idea that the people must look to the government for everything.

Association Executive Vice-president Dr. Frederick J. Cullen said "today probably the greatest item of expense in the manufacturing of a medicine must be charged to its control system. In many instances the work of control occupies much more time than is required to prepare the preparation. Controls are constantly being checked and improved."

Considering the changing medical scene in which old medicines are being discarded by the medical profession with increased rapidity, Dr. Cullen said:

"For many years it has seemed that most of the efforts in the medical research field were expended in an attempt to produce new chemicals to be used in the treatment of disease. In the past few years there has been a tremendous increase in the building of new research facilities, as well as improvement in and expansion of the old. However, it does not seem to me that little thought has been given to the study of ingredients contained in many of the medicines that have been used on a basis of empiricism for many years. The fact that many ingredients have stood the test of years should indicate that they do have value which should be capable of scientific proof. You are all familiar with the English housewife's brew which was used successfully so many years ago and which later was found to contain the very valuable and important drug, digitalis. Likewise, you are familar with reports discussing the physical condition of the Norwegian fisherman and his family who consumed cod livers as part of their diet or who used cod liver oil. Today we know that vitamins A and D are the active ingredients of cod livers, and that cod liver oil and these vitamins are used extensively, and particularly for children. You are also familiar with the fact that for over 5,000 years Chinese physicians have been using a drug called mahuang, but it has been only within

the past fifteen or twenty years that it was discovered that this crude drug contains the valuable substance ephedrin.

"We have heard it said that the principal value of sarsaparilla is its flavoring quality, but recently, however, research workers tell us that it contains a hormone-like substance. As to potassium iodide, no one, to my knowledge, has satisfactorily explained its value, but it has also withstood the test of many years of use. Therefore, if what some of the modern scientists say about sarsaparilla is true, and potassium iodide does have value, then the old-fashioned doctors and the medicine manufacturers who were using these ingredients did provide valuable medication. Should the old drugs be discarded without first being carefully studied? I doubt it. I believe that careful studies should be made of a drug before it is discarded. It seems to me that in general we are becoming quite adept at discarding the old and trustworthy for the new and untried."

These observations led Dr. Cullen into a discussion of the actions of the Food and Drug Administration in judging the safety and efficacy of medicinal preparations. Said Dr. Cullen:

"For all practical purposes, we have seen worm medicines removed from the market because it is claimed they are too dangerous to be used except under the supervision of a physician. Products of value in removing worms are greatly needed in many sections of this country. There are extremely few reports of proven injuries compared with the quantity of worm preparations that were used in the past. The question arises as to whether or not the amount of purported damage is sufficient to warrant complete removal of vermifuge preparations from the market. One wonders whether it is more dangerous to use a worm preparation or to allow a child to go untreated.

"For many years physicians have prescribed various types of glandular substances for oral use, but the Federal agencies have stated that the products used in this manner are worthless, and are removing them from the market. In other words, these agencies are now dictating to the physician the type of medicine he may prescribe.

"Undoubtedly many of the products that are being questioned by the Federal agencies are not dangerous as purported; and, on the other hand, products that are stated to be worthless may have definite therapeutic value. In my opinion, it is the responsibility of the manufacturers of prescription-type products, as well as of packaged medicines, to determine once and for all whether or not the ingredients used are efficacious and safe, when used as directed. This information must be made available, particularly to the physician. The packaged medicine manufacturer should discontinue the use of substances which are not effective, as well as those that are found to be dangerous when used as directed. His product should contain only ingredients that are safe and effective.

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Association General Counsel James F. Hoge brought the members up to date on the status of legislative activity. Said Mr. Hoge:

"Two bills of particular note are pending—the Keefe Bill, H. R. 4572, which will authorize the Food and Drug Administration to issue subpoenas compelling the attendance of witnesses and the production of documents at administrative hearings and which would make the refusal to attend and testify or to produce documents in obedience to such a subpoena a criminal offense. The other important bill is the Van Zandt, H. R. 562. This bill would amend Section 801 (d) of the Federal Food, Drug, and Cosmetic Act so that an article for export would only be exempted from the misbranding and adulteration provisions of the Act if (1) it complied with the requirements established by the country to which it was to be shipped; and (2) the exporter obtained authenticated copies of the laws and requirements upon which he relied.

"It was readily apparent that if this bill were enacted it would seriously curtail foreign trade. Many of the foreign countries to which American drugs are shipped, especially those in the Latin American group, have standards and labeling requirements substantially different from ours. In some, there are various subdivisions corresponding to our states and cities. Also, in a number of countries, the requirements are established by decree which may change from time to time without advance notice. It would thus be virtually impossible for an American manufacturer to obtain authenticated copies of the decrees and regulations applicable to each shipment of drugs to a foreign country. At the conclusion of hearings on this bill, the Committee indicated its dissatisfaction with the bill and suggested that the Food and Drug Administration prepare a bill that would correct the abuses but permit American drug manufacturers to continue their export business.

"In the field of the Federal Trade Commission, the O'Hara bill was reintroduced. It would require the Federal Trade Commission t o try its cases in the Federal District Courts. The O'Mahoney-Kefauver bill and bills by Messrs. Kackson, Hobbs and Cellar in the House represent the long-time effort of the Federal Trade Commission to amend Sections 7 and 11 of the Clayton Act. They are designed to prohibit corporate mergers by the acquisition of assets in the same manner as mergers by stock acquisitions are now prohibited. They provide in substance that no corporation shall acquire the stock or assets of another corporation engaged in interstate commerce 'where in any line of commerce in any section of the country, the effect of

such acquisition may be substantially to lessen competition, or to tend to create a monopoly.'

"The Clayton Act is enforced by the Federal Trade Commission, and by providing in these bills a broad undefined test of a 'line of commerce' and 'section of the country,' the Commission would be given administrative discretion to order a divestiture of stocks or assets in circumstances where the acquisition has little or no effect on the capacity of the acquiring corporation to dominate the industry of which it is a part. The Commission would thus be vested with the power to regulate the growth of American business except as it grows and develops from within.

"State trade-mark legislation literally erupted this year. Bills which would have made registration compulsory were introduced in Ohio, Florida, New Hampshire, Washington, Indiana, Maryland, Wyoming, Missouri and New Mexico. All of the bills so far, except in Missouri, have been satisfactorily revised, or defeated—not, however, without consideration anxiety and extensive effort. It has seemed strange that state legislation would break out this way so soon after the passage of the new Federal Trade-mark Statute—the Lanham Act—which states its intent to protect registered marks used in commerce within the control of Congress from interference by state or territorial legislation. The explanation has been suggested that the bills, in some cases, are advanced by firms engaged in the trade-mark registration business.

"Speaking of trade-mark registrations, there has been the last several years a curious development in the application to register generic terms in foreign countries. Some of these applications have been by American manufacturers although most are by foreign applicants. South America has been the most fertile field for them although we have had some in Spain, Palestine, Portugal, France, China and Iran. Illustrations of these terms applied for are iron, hemoglobin, ascorbic acid, estrogenic, sun tan, niacin, folic acid and B-complex. We have considered nearly 100 such applications and, on behalf of the Association, have opposed 35 of them, reaching our decision for opposition on the general interest of the Association in such terms and on the hazard to the membership generally for such terms to be registered as trade-marks and thus restricted in use."

Personnel Appeal at Professional Meeting

(*Continued from page 33*)

Whether those in attendance at a booth are from the home office or members of the field staff, everyone is instructed to tell the same story in his own way. In addition, we point out that a convention interview is quite different from an office detail since it is usually of the hit-and-run type. It is necessary to have the salient points of a sales talk on the tips of one's fingers. In this way, we try to get the most out of the minute or two the doctor gives us.

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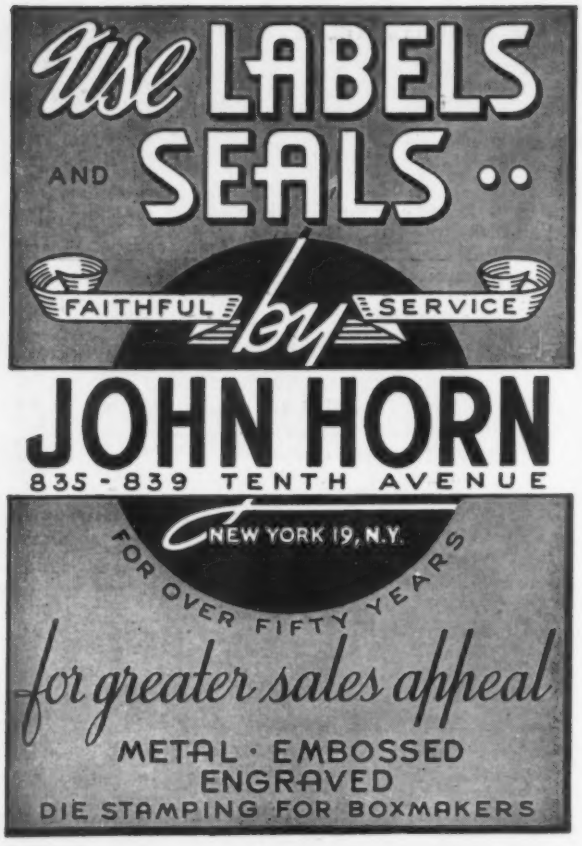

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usually employed at professional meetings. Medical conventions naturally are intended for physicians, although pharmacists, nurses and others in allied fields frequently attend. Few meetings are open to the public.

Because our audience consists almost entirely of physicians, our approach is usually educational and scientific in nature. This has been found to be most acceptable because physicians are always anxious to increase their knowledge of drugs and learn more about the tools with which they work.

Consequently, we use an appeal which is directed toward educating the doctor about our products. This may be done with diagrams, bar charts and other devices used in medical publications. Liberal use is made of medical reprints and abstracts. These, as well as product literature and samples, may be distributed.

The sensible use of literature and samples is advisable, because physicians cannot possibly carry away all of the material which is offered to them. Those who try often "dump" their supply in the wastepaper basket in their hotel room.

There's an answer to this problem. As an alternative, we invite the physician to register at our booth, although we do not insist upon it. When he registers we ask him to indicate his preference for whatever product information and samples he would like sent to his office. In this way, we believe it is more likely that our samples will do a good job for us.

The most important point about registratons is fast follow-up. One that takes two or three months to handle is often wasted.

There are other ways of appealing to physicians at medical conventions. For instance, one company distributes tickets to a lottery in which the physician has a chance to win a car; other companies give away souvenirs. Even sex may be featured. For example, companies selling office equipment frequently use this type of appeal. By placing a scantily-clad model on an examining table, more than usual interest is obtained. Not all of this interest is in the table, of course. But that doesn't disturb the representatives. They show just as much enthusiasm in demonstrating the features of the table as they do of the model. This type of appeal should probably be listed under the heading of education.

In recent years, several companies have sponsored television exhibits in which surgical operations were shown. The very latest in this field is a color television exhibit which has been scheduled by a Philadelphia drug firm. This was a feature at the recent American Medical Association Convention in Atlantic City.

It isn't always necessary to spend a lot of money in developing new appeals. For instance, recently our firm successfully featured a live guinea pig in a series of Thephorin exhibits. Thephorin is a new antihistamine and since antihistamines are tested in guinea pigs, we had a tie-in which proved very effective.

In conclusion, we believe the effects of a convention

on sales are largely intangible for the reason that it's almost impossible to measure the results. Yet, from years of experience, we feel that it is worth while to attend good conventions.

As one authority has stated, "No other medium provides such an opportunity for the simultaneous application of advertising and detailing effort to masses of prospects."

Conventions are considered less important than representatives or advertising. Nevertheless, when properly planned and executed, they make a definite contribution to our sales promotion.

Aureomycin

(*Continued from page 40*)

all showed subjective and objective improvement, with a return to normal temperatures. The results in these patients appeared to be comparable to those obtained in similar cases after treatment with penicillin or with effective sulfa drugs. They also reported that aureomycin was effective in a case of meningococcocemia.

There is also some evidence that the golden antibiotic may be useful in treating whooping cough. According to an announcement made by the Public Health Service on May 17, 1949, preliminary clinical trials suggest that oral aureomycin shortens the course of the disease and lessens its intensity. Complete recovery was observed in a few days in some of the cases in which the drug was given early.

Treatment with aureomycin yielded prompt and satisfactory responses in seven of eight patients who were ill with infections caused by *Staphylococcus aureus hemolylicus*. Several of these cases had not responded to therapy with sulfadiazine or penicillin or both.[14] Oral aureomycin given to newborn infants caused rapid clearance of multiple skin and breast abscesses due to this organism.[20]

In a number of cases of chronic urinary tract infection, many of which had not responded to penicillin, streptomycin or sulfonamide therapy, have cleared promptly with aureomycin.[20] Finland and his coworkers[6] have reported that in infections of the urinary tract, considering the types of case treated, the results were favorable and were probably comparable, if not superior, to those obtained with streptomycin or sulfa drugs in similar cases.

The same investigators feel that the results in some of their patients with typhoid and Salmonella infections appeared to be favorable, but in most of the cases the effects were equivocal. In general, it is felt[11] that the beneficial effects of aureomycin in these intestinal conditions are not striking.

Different investigating teams have obtained different results with aureomycin in the treatment of typhoid fever. For example, Scholenberg and his colleagues[20] treated three early cases of typhoid fever with the antibiotic. Such treatment resulted in negative blood and stool cultures within 48 to 72 hours. Clinical responses varied, however. In contrast, Dowling and

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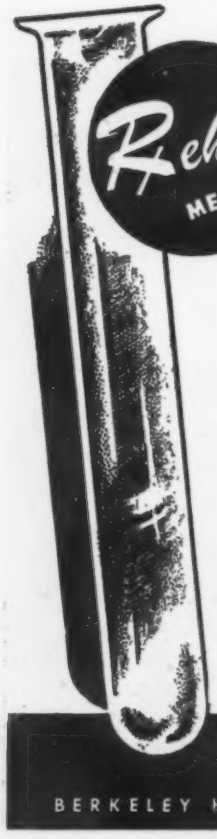

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his co-workers reported that four patients with typhoid fever showed no clinical or bacteriological response when treated with aureomycin.[19] In Long's[14] opinion the drug is not to be recommended for treating typhoid fever. In his view, chloromycetin appears to be definitely superior to aureomycin in the treatment of this disease.

Both gonnococcal and nonspecific urethritis respond favorably to aureomycin.[9] However, even though it was evident that aureomycin was effective against acute gonorrhea in males, it was also apparent that the all-over results were inferior to those obtained with adequate doses of penicillin. The investigators conceded that the optimum dosage schedule for aureomycin has not yet been defined. In two patients with nonspecific urethritis, which had not cleared up after repeated therapy with penicillin, sulfonamides and streptomycin, symptomatic improvement was obtained after aureomycin administration.

Another, newer indication for aureomycin may lie in the treatment of tularemia, according to the observations of the group headed by Woodward.[34] In laboratory investigations, aureomycin was found to exert significant beneficial effects in mice experimentally infected with the disease. In clinical studies on three cases of tularemia. They concluded that the response of the patients to aureomycin therapy is comparable to streptomycin therapy in degree of effectiveness.

There is considerable evidence that aureomycin is a valuable agent in the field of ophthalomology. Indeed, after studying its potentialities in this phase of medicine, Braley and Sanders[35] stated that, "Aureomycin has a wide spectrum of activity in ocular infections." An 0.5 per cent solution of aureomycin borate produced no damage to the cornea or conjunctiva. In this concentration it proved effective against staphylococci, pneumococci, influenza and inclusion conjunctivitis. It also appears to be effective in cases of Mooren's ulcer, including atypical forms of unknown cause. Although the value of aureomycin in epidemic keratojunctivitis requires further evaluation, Braley and Sanders found it more effective than any other antibiotic or drug used in the treatment of this eye condition.

There are various other infections where the evidence for the use of aureomycin, though meager, is rather indicative. Although it has yielded some measure of success in certain forms of extrapulmonary tuberculosis, such utility for aureomycin is still in the highly experimental stage.[14,20] Experimental work by Heilman[36] on laboratory, animals indicates that the drug is quite effective in certain spirochetal diseases. In one form of relapsing fever and in Will's disease, it is even more effective than penicillin. After studies of two patients with acute syphilis, O'Leary and his associates[37] reported that aureomycin appears to have some antispirochetal activity when administered by the oral route. Because of several advantages inherent in the antibiotic, this team is continuing its investigations.[38]

Despite the great amount of work already done, it is obvious that a new agent like aureomycin requires

considerably more study and time for a full evaluation of its therapeutic status. Time will also bring out the various limitations of the golden antibiotic.

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Control Systems in Cosmetic Laboratories

(*Continued from page 37*)

specific gravity is not of too great importance since it is function of its particle size. Most treatment of powders where it is primarily used include grinding through a micropulverizer. Such a treatment would effectively reduce it to the desired size.

Magnesium and Zinc Stearates should be examined for their "slip' and apparent specific gravities. Their function as water repellents could be checked by treatment with water.

Chalk may easily be checked for apparent specific gravity and for $CaCo_3$ content.

A.P.M.A. Meeting

(*Continued from page 27*)

groups, Dr. Klumpp said he did not favor a merger into one industrial organization. He pointed out that due to this cooperation during the past year brand names had been codified and the first joint industry publication on the subject was issued. He said it was "a wholesome thing for two groups to consider industrial problems independently and come to their own conclusions," adding, "We are more likely to arrive at the truth this way than otherwise."

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In opening a discussion on the "Economic Panorama of the Pharmaceutical Industry," Chairman Howard W. Fonda, vice-president, Burroughs-Wellcome & Co. (U. S. A.), said that "the pharmaceutical industry has been fortunate that it has not been as seriously affected during these periods of stress as have been our sister industries, such as the food and cosmetic industries. I believe the records show that our industry is one of the last to be swept economically downward and also one of the last to go up. It is fortunate that the period between the beginning of the downward trend and the beginning of the upward swing is not as long as that suffered by the majority of other industries." He added:

"Economic progress requires changes. We cannot have a free economy without fluctuation. Business, therefore, as never before, must be prepared to meet changing conditions by playing a responsible role in the conduct of National affairs, and our industry is no exception to the rule. Mention of the Government's proposed Compulsory Health program should be sufficient to show that our industry has a real part to play in the conduct of National affairs."

Speaking on "Management Policies Under Changing Conditions," James L. Rogers, president of the Central Pharmacal Co., said that "the underlying theory is that, with business less bouyant, operating profits of the next year or two may have to come from economies in operations rather than, as in the past few years, from increased sales volume." Indicating the steps which should be taken to improve the position of a pharmaceutical manufacturer, Mr. Rogers pointed out the following:

"There are very few things in business that cannot be solved through reorganization and a policy which includes firing and selected rehiring. It is usually sound and economical to do these things, as unpleasant as they may seem, because business is business, and business is conducted for the general welfare and not for the edification and enjoyment of certain individuals.

"A very important management problem has developed as a result of the regrettable duplication of specialties, and this situation has met the condemnation of prescription pharmacies and drug associations. Management must set up a constructive policy which will eliminate this undesirable situation, and a line should be drawn by management between a product which is a real contribution to better health and the product that causes needless and uneconomical duplication of wholesale and retail inventories.

"Research and product development are constructive phases of the phamaceutical business. Each company has a right to progress in direct ratio to its contribution to the improvement of medical science, and conversely a company that does not do its part in the furtherance of the medical profession cannot justify its place in our splendid industry. It is not sufficient to produce new and better products. We must do more by making a larger number of better products available to more

people at lower prices since the cost of medical care is a most important matter . . . In my opinion no pharmaceutical house representative has a right to take up the time of a physician or a prescription druggist unless he is promoting a product which is different and superior for scientific reasons. In the same sense, no company has a right to serve the medical profession and public welfare at the expense of these groups unless they constructively develop and market products which contribute to improving the practice of medicine and public health.

"It is now generally agreed that one man should be placed in charge of new product development work, and that there should be a committee set up to work with this individual. Research, control, manufacturing, sales and advertising, and general management should be represented on this committee. The primary job of the individual in charge of new product development work is to coordinate the efforts on all phases of this vital effort.

"The transition from boom to more stable prosperity, though painful to the national economy, will certainly result in a sounder base for new and greater economic advances. When the current readjustment has run its course and buying for inventory replacement revives, business will find itself on an infinitely more satisfactory foundation. The changes, if permitted to run their natural course, will bring overdue relief to millions of consumers who have been and are being squeezed between high taxes and high living costs.

"Most manufacturing firms have for many years known to the penny their costs of production on each of their products. Some companies are now beginning to use methods for a critical study to determine the cost of distributing each product. Because of the vital importance and timeliness of a study of distribution costs, I recommend that the APMA use some of its funds for conducting a scientific survey of distribution costs. This program could logically tie-in with the NARD study, with the net result that a greater industry service would be rendered.

"Some deterioration in business ethics is already noticeable and as the economic situation tightens, we shall doubtless see more tendencies toward business mal-practices. Particular reference is made to product copying and related types of chiseling, the most insidious diseases which can befall any industrial group. If we are to remain strong and fulfill our destiny, we must somehow or other continue to raise the level of our own industry. Perhaps this can best be done through education and much has been accomplished, but unfortunately the cold fact remains that among our members and non-members we find unprogressive companies, copy-cats and chiselers. There are too many 'me too' outfits who scarcely wait for the ink to dry on the label of a new product produced by better companies through intelligent research, sound development and thorough clinical trial, before coming out with it. Of course, the copy-cats hold down their overhead because they have no research and product development

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expense as to laboratory facilities or personnel. It would be far better for these companies, from a selfish viewpoint, to contribute to the science of medicine by doing or underwriting research. At least they could do something for the medical profession, even if it is only the development of better formulae or more appealing medication from known ingredients. Copying is stealing, and chiseling as such is a negative and destructive procedure which helps no one.

"Our relations with the Food and Drug Administration have been of the highest order. Much has been accomplished through committees and general cooperation . . . Our Association has and will always fight any move to subordinate or weaken the position of the Food and Drug Administration. However, since there is always room for improvement, I propose that the APMA spearhead a movement which will result in a combined APMA-ADMA committee that will work with Food and Drug officials in developing a code or rules relative to plant inspections. There have been complaints on both sides, and it would be mutually advantageous to have mutually agreeable policies relative to plant inspections, in order that pharmaceutical manufacturers may have advance knowledge of what is expected and required."

E. J. Lyons, vice-president of Merck & Co., discussed "Personnel Management," saying that "the old and fundamental truth that good or bad employee relations depend on the hour-to-hour contacts of the worker and his boss, and not on a mythical expert, even in the form of a vice-president for personnel, has become clear. The expert can't substitute himself for the first line supervisor in every corner of the plant, laboratory or office. I do not mean to imply that the personnel department is or should be of less importance to industry. On the contrary, there has never been a time when the personnel function was of more importance than it is today. My questions concern the manner in which personnel discharges those functions. I am not even sure that personnel departments are entirely to blame for getting a little off the track. Successful personnel departments work through, not around, the line management, because personnel functions are service functions, and in themselves do not build or sell a single automobile, a single chemical, or a dime's worth of any other product. The success of the labor relations expert in the personnel management group rests on his ability to impress on line management personnel that employee relations are their daily responsibility, that they are paid for handling people properly as well as materials and machines, that the production executive must have a hand in the negotiation of union contracts if his supervisors are to be successful in administering them. The expert can't do the job himself; he must accomplish it through the line supervisor."

Ciba Pharmaceutical Products Vice-president Vincent A. Burgher, speaking on "Marketing Management," said:

"The job before Management is not an individualistic one. It warrants teamwork, with executives of each department correlating efforts. At this time more than ever, can production and sales work in double harness. With sales maintaining or upping the volume of turnover, and production lowering the break-even point through operational streamlining resulting from instituted time studies, the incoming sales volume will mean rapidly expanding profits. The sales manager who has planned well ahead, and who has established standard sales territories far in advance of actual territorial needs, has far less to worry about than the executive who has complacently relaxed during the prosperity eras, when the seller reigned king.

"Every effort should be made towards securing larger unit orders. Curtailment of selling expenses will thereby be favorably affected to a degree, through savings in shipping, billing time and multiple sales calls. Sales emphasis should, where good business dictates, be placed on high profit items. A territorial balance of sales should obviously be maintained and a representative or representatives should not be allowed to focus full sales attention on a pet product or products. I feel very strongly that the curtailing of sales activities is not the answer to the profit problem. Do not lose track of the fact that the profit percentage becomes most vulnerable when a fall in sales volume nears the break-even point.

"Likewise do I personally advocate that no cuts be made in product research or market research. The former is very excellent insurance for protection of future business. When we consider that approximately 50 per cent of the products used in the filling of prescriptions today did not exist a decade ago, we can appreciate the sound investment in product research. Marketing research more than pays its way and its favorable influence on the profit picture is by no means a minor one.

"Advertising expenditures must be viewed with a critical eye, and we can be very choosey in these times in selection of productive media. Whether you should display at certain medical conventions should obviously be governed principally by your records of past showings at those meetings. Many firms may find it advisable at this time to emphasize selling copy rather than institutional, with the thought in mind of strongly boostly individual item turnover. As usual, maximum collaboration should exist between advertising and sales so that promotional efforts of the field force may be correlated with journal and direct mail advertising."

The 1949 Research Award of the Association was presented to Dr. Selman A. Waksman, the discoverer of streptomycin. Dr. Russel J. Fosbinder, president of the Maltbies Chemical Co., presided over the award session, and Randolf T. Major, vice-president and scientific director of Merck & Co., spoke on "Selman Waksman—Scientist, Teacher and Benefactor of Mankind."

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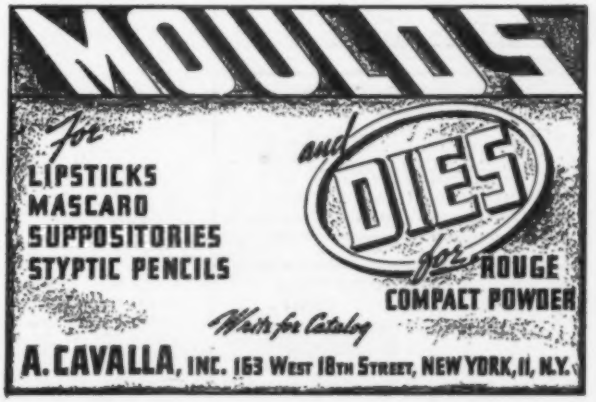

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